ABSTRACT BOOK

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MEETING CHAIR
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HYBRID MEETING

1 - THE EFFECT OF LOCAL ESTROGEN THERAPY ON THE URINARY MICROBIOME COMPOSITION OF POSTMENOPAUSAL WOMEN WITH AND WITHOUT RECURRENT URINARY TRACT INFECTIONS.

Anglim Breffini, Phillips Caleb, Shynlova Oksana, Alarab May

Department of Biological Sciences, , Texas Tech University, Lubbock, United States, Lunenfeld-Tanenbaum Research Institute at Sinai Health System, University of Toronto, Toronto, Canada, Mount Sinai Hospital, University of Toronto, Toronto, Canada

OBJECTIVE

Recurrent urinary tract infections (rUTIs) occur in 2-10% of postmenopausal women. Local estrogen therapy (LET) has been shown to reduce UTIs. This study aimed to compare the urinary microbiome between patients with and without a history of rUTIs, and to examine whether treatment with LET influences the diversity and richness of microbiome species in two groups.

METHODS

Postmenopausal women with and without rUTIs attending the urogynecology clinic between April 2019 to December 2020 were recruited. Exclusion criteria included: premenopausal status, history or diagnosis of urgency urinary incontinence (UUI), use of LET within the preceding 6 months, receipt of a course of antibiotics within the last 7 days, asymptomatic bacteriuria at time of recruitment and use of probiotics. Aseptic, transurethral urine samples were collected at recruitment and at 3-6 months following treatment with LET. The V1-V2 and ITS region of the 16S rRNA gene were sequenced to identify bacteria.

RESULTS

In total, 37 women were included in our analysis with 20 controls and 17 patients with rUTI. During follow up, symptomatic UTIs occurred in 3/17 (17.6%) and 0/20 in the rUTI group control group respectively. Data shown in Figure 1 (the stacked bar plots) illustrates the distribution of the top 20 most common bacterial species in the control group versus rUTI group before and after LET treatment. Lactobacillus was the most common genus. The heatmap (Figure 2) shows samples that are clustered (rows) based on similarity of their microbiota composition.

There was no difference in diversity of microbiome composition of the control group when testing using ANOVA to assess effects of duration of LET, age, BMI, parity and hormone type (vagifem vs premarin). Following LET, the species diversity was lowered in the rUTI group ($p = 0.001$) (Figure 3). BMI significantly affected species diversity in the rUTI group, with diversity lowering with increasing BMI ($F = 17.85$, $df = 1,59$, $p = 0.001$, $R2 = 17\%$). Following LET, the species richness was lowered in the rUTI group ($F = 4.94$, $df = 1,59$, $p = 0.05$). The results of the regression of richness onto age showed species richness to lower with increasing age in the control group ($F = 2.42$, $df = 1,29$, $p = 0.03$, $R2 = 4.1\%$). The results of the regression of richness onto BMI showed species richness to lower with increasing BMI in the rUTI group ($F = 1.81$, $df = 1,29$, $p = 0.04$, $R2 = 4.7\%$).

Comparison of relative abundances showed that Finegoldia magna was present in 33.3% of samples (5/15) before LET, but in only 6.7% (1/15) after LET ($q=0.04$) (Figure 4). F. magna was not present before or after LET in the control group. Klebsiella aerogenes showed significantly different relative abundance between rUTI and control groups at baseline (before LET). Klebsiella aerogenes was found in 80% (12/15) of rUTI samples before LET and in 53.3% (8/15) of control samples before LET ($q=0.04$).

CONCLUSION

Treatment with vaginal LET altered the local hormonal environment of the urinary bladder and likely protected women from development of rUTI by decreasing the presence of F.magna. In order to confirm the significance of this bacterial species in rUTI symptomatology our finding needs to be validated on a larger patient cohort.

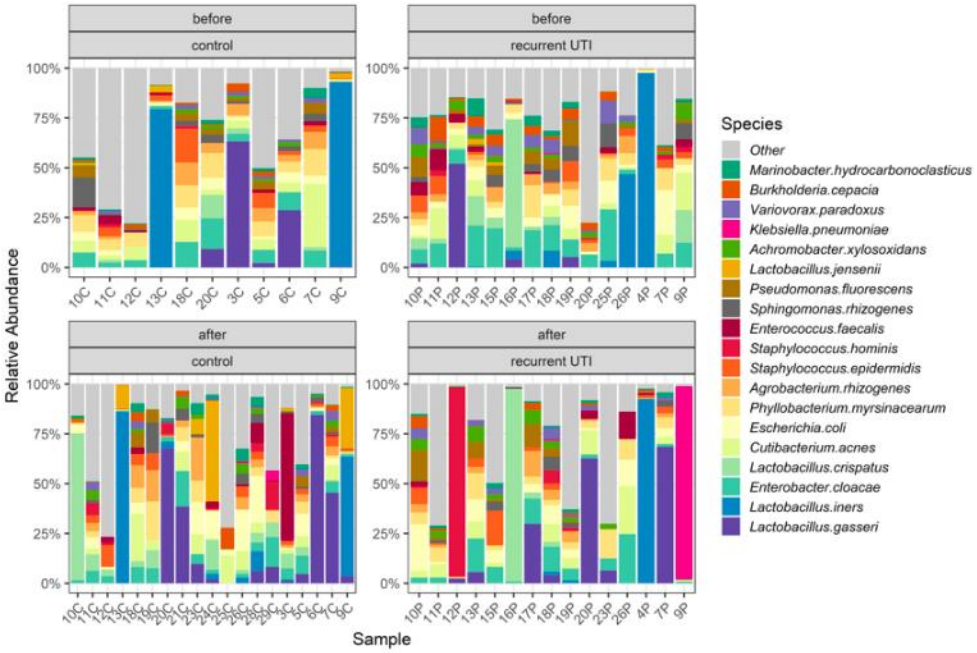

Figure 1. Bar plot of distribution of the most common bacterial species before and after LET treatment in the control (C) and recurrent UTI (P) groups. Numbers represent deidentified participants. Different colors represent different species.

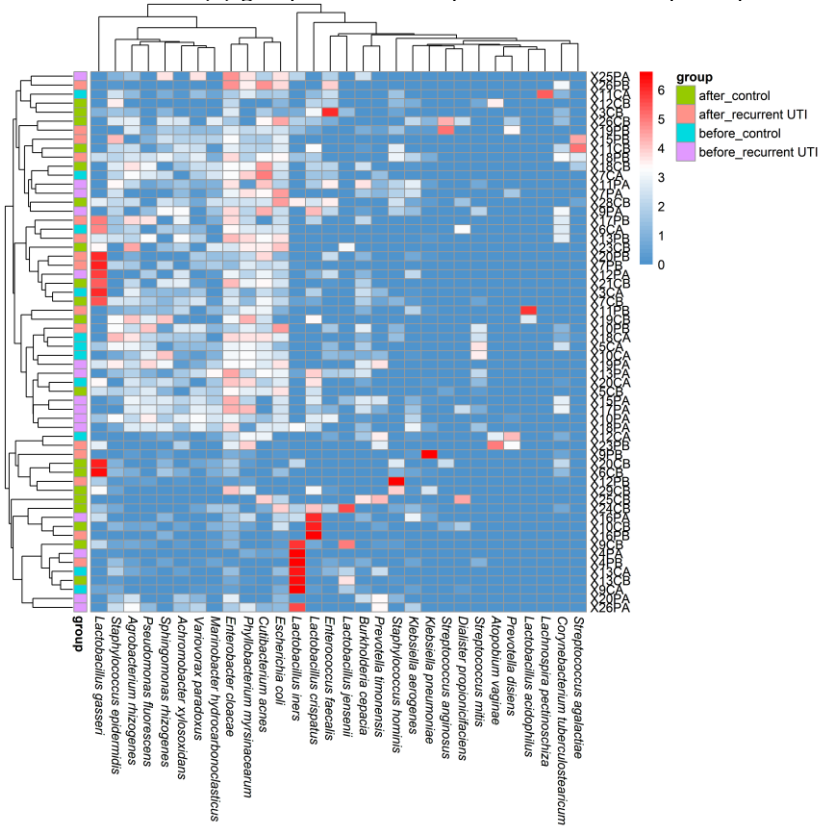

Figure 2. Heatmap of relative abundance of bacteria species in urine samples of postmenopausal women with and without rUTI. The heatmap represents relative abundances of the 30 most common bacterial species before and after LET treatment. The vertical bar to the left of the figure and the list of the individual samples to the right of the figure denote sample group membership (blue = control before LET/CA, green = control patient after LET/CB, purple = rUTI before LET/PA, pink = rUTI after LET/PB).

2 - DEVELOPMENT AND VALIDATION OF THE INTERNATIONAL FEMALE COITAL INCONTINENCE QUESTIONNAIRE (IFCI-Q)

Gubbiotti Marilena, Rubilotta Emanuele, Balzarro Matteo, Giannantoni Antonella, Rosadi Stefano, Serati Maurizio

AOUI Verona, Dept. of Urology, University of Verona, Verona, Italy, San Donato Hospital, Det. of Urology, Arezzo, Italy, University of Insubria, Dept. of Obstetrics and Gynecology,, Varese, Italy, University of Siena, Dept. of Medical and Surgical Sciences and Neurosciences, Functional and Surgical Urology Unit, Siena, Italy

INTRODUCTION AND AIM OF THE STUDY

Coital urinary incontinence is an underestimated urinary symptom characterized by urine leakage during intercourse with a serious impact on female sexual function, which often may lead to the abandon of sexual activity. To date, there are no specific validated questionnaires for coital incontinence (CI). Aim of the study was to develop and validate a questionnaire "International Female Coital Incontinence- Questionnaire" (IFCI-Q) to evaluate the presence, severity and type of CI and its impact on quality of sexual intercourse.

MATERIALS AND METHODS

This was a prospective, multicenter study. Sexually active women complained for CI, underwent urogynaecological screening and filled the self-reported IFCI-Q. The IFCI-Q validation process included the following stages: (i) Questionnaire development and expert focus group (urologists and gynecologists experts in the field of functional urology); (ii) Administration of IFCI-Q to sexually active women complained for CI, by cognitive interview; (iii) Expert focus group to assess for content validity; (iiii) Psychometric assessment of internal consistency by Cronbach's alpha calculation; (iiiii) Test-retest reliability.

RESULTS

From January 2019 to May 2020, 30 women (mean ± SD age: 43.4 ± 17.1 y.o.) complained of CI were enrolled, and completed the IFCI-Q. All 30 subjects returned the questionnaire for the assessment of test-retest reliability. 43.4% of patients had OAB symptoms, 23.3% had mixed urinary incontinence (UI) and 6.6% complained of stress UI. Patients with CI during penetration had a higher prevalence of predominant SUI (7/10), and all women suffering from CI during orgasm had OAB symptoms (11/11). 80% women feel depressed and 56.6% patients reported that CI restricts their sexual activity. Total scores range from 1 to 13 (summation of the question's score): higher score indicates a more serious condition of CI and their impact on quality of life and quality of sexual intercourses (<7: mild CI, 8- 10: moderate CI, >10: severe CI). Internal consistency and replicability of data were in the adequate range (Cronbach α =0.737). The test-retest procedure revealed that the k-values of each item are very good.

INTERPRETATION OF RESULTS

From the review of the available literature, it is now clear that CI needs of more attention in the clinical practice, due to its dramatic impact on female sexual function, and it should have even more prominence in research. To date, although there are available questionnaires for the evaluation of female sexual dysfunction, there are no specific validated questionnaires for CI. Our results demonstrated that the IFCI-Q provide a valuable and useful adjunct to clinical care and outcomes research in female with lower tract urinary symptoms and/ or sexual dysfunction.

CONCLUSIONS

This is among the first studies aimed to develop a questionnaire on female CI. IFCI-Q is a reliable questionnaire on CI and demonstrated a high level of internal consistency and reliability.

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3 - PATIENT SATISFACTION AND EASE OF USE OF A NOVEL METHOD FOR ELECTRONIC ADMINISTRATION OF VALIDATED QUALITY OF LIFE QUESTIONNAIRES

Rusavy Zdenek, Smazinka Martin, Havir Martin, Míka Petr, Paveza Roman, Kalis Vladimir

Charles University, Faculty of Medicine in Plzen, Plzen, Czech Republic

INTRODUCTION AND AIM OF THE STUDY

Assessment of the impact of pelvic floor disorders on the quality of life using validated measures is an essential part of a proper urogynaecologic examination and follow-up. Furthermore, validated questionnaires are a valuable tool for clinical research. However, questionnaires administered in paper form must be converted to digital form for further analysis, they generate paper waste or high demands for space in an archive. In addition, calculation of the scores may be very demanding and time-consuming in some questionnaires. Due to a lack of staff able to deal with paper questionnaires, we have created an electronic system based on Google Forms allowing administration of validated questionnaires using a tablet PC according to a previously published methodology (1). Due to privacy concerns and difficulties of elderly patients in working with the system we have developed Medical Electronic Survey System (MESS) dedicated to this purpose. This system has become a routine tool used at our department. The aim of this study was to compare satisfaction and ease of use between Google Forms and MESS.

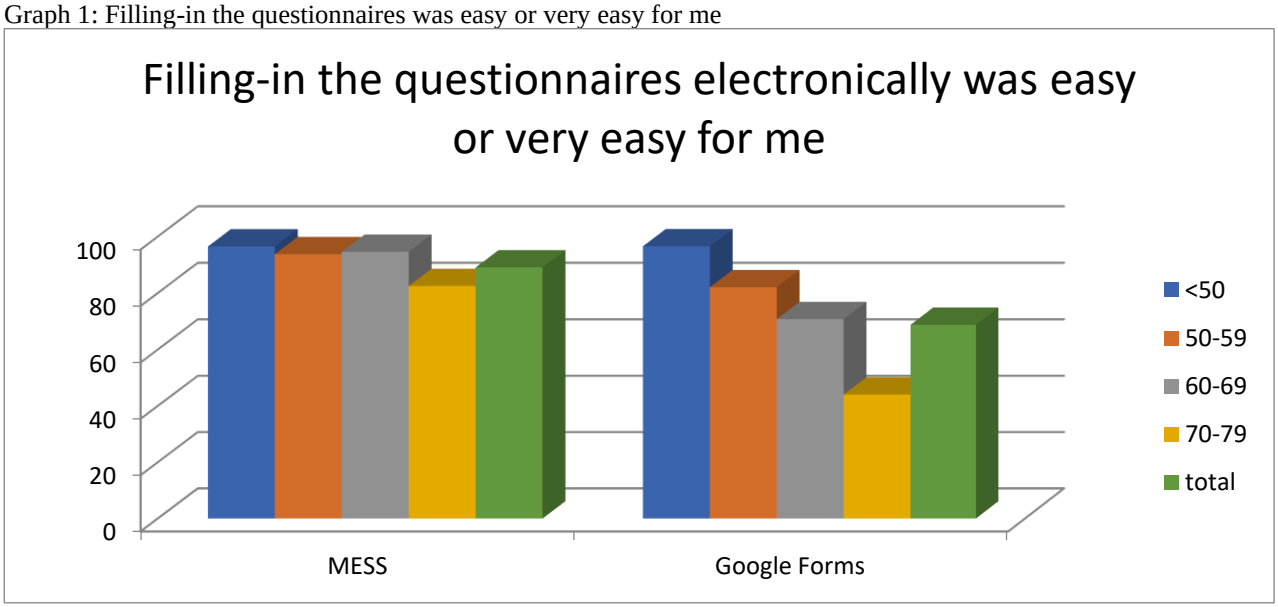
MATERIALS AND METHODS

This was a prospective cohort study comparing the answers to a satisfaction questionnaire. The questionnaire contained the following questions: “Does the electronic form of filling-in the questionnaires as opposed to the paper form suit you?” “How difficult was the filling-in the questionnaires for you?” “Did you fill-in the questionnaire all by yourself?” and “Would you be able to fill-in the questionnaire electronically without any help?“ The questionnaire was given to patients along with other validated questionnaires (KHQ, ICIQ-UI, PFDI, PFIQ-7, St.Mark's score, PISQ12 and PISQ-IR) during the first examination or follow-up. Into the Google Forms group we enrolled all women who filled-in the questionnaire between 11/2013 and 10/2015. The women that filled-in the questionnaire using MESS between 6/2019 and 3/2020 were enrolled in the MESS group. The answers to the questionnaire were compared using Fisher´s Exact Test or a Wilcoxon Two Sample test depending on distribution of normality. P-value under 0.05 was considered statistically significant.

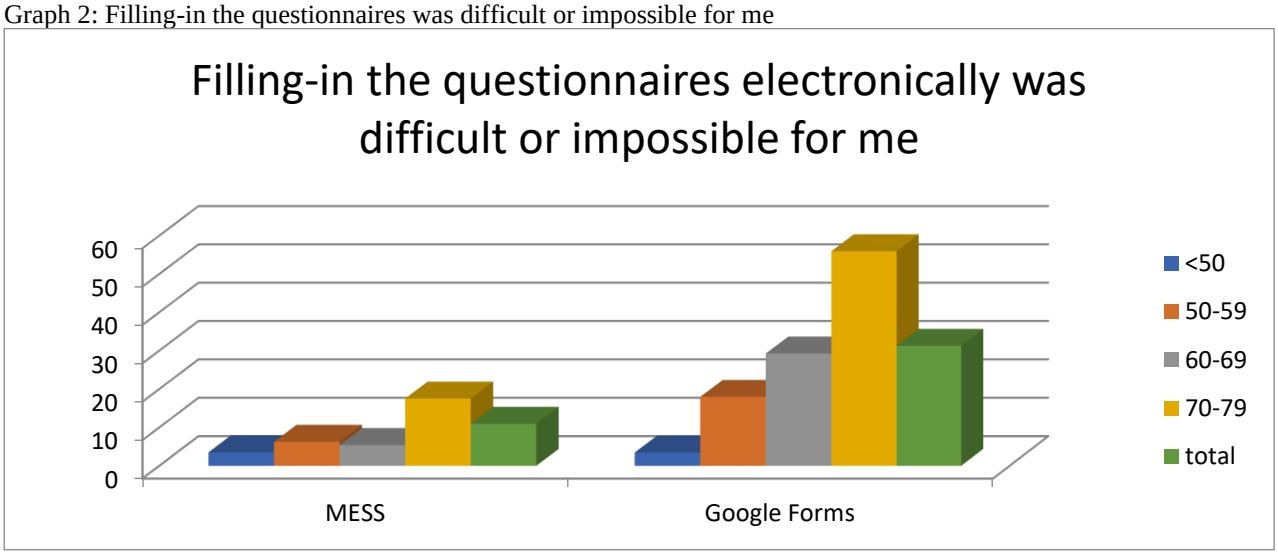
RESULTS

In total 193 satisfaction questionnaires were completed by 155 patients using Google Forms and 329 questionnaires were completed by 299 patients using MESS. The age distribution corresponded to a typical urogynecologic population (<50 yrs – 86 qs, 50-59 yrs – 103 qs, 60-69 yrs – 176 qs, 70-79 yrs 139 qs) and did not statistically differ between the groups (mean age (62.2 vs. 62.0, NS). Significant differences in satisfaction between the compared systems were observed in all age groups. The electronic form of filling-in the questionnaires suited more women using MESS (84.5 vs. 65.6%, $p<0.05$). Filling-in the questionnaires was very easy or easy for 89.1 % using MESS vs 68.7% in Google Forms, $p<0.05$. The statistically significant difference was not observed in women younger than 60 years (Graph 1). The electronic form of filling-in the questionnaires was very difficult or impossible especially for women using Google Forms (31 vs. 11 %, $p<0.05$). The difference was not observed in women under 60 years (Graph 2). Significantly more patients filled-in the questionnaires by themselves using MESS (87.2 vs. 44,8%, $p<0.05$) and were confident about their completion without any help (76.0 vs. 41.5, $p<0.05$). The major difference was observed in the age group 60-69 years (92.8 vs. 36.9%, $p<0.05$) and (82.0 vs. 39.1%, $p<0.05$). All clinicians observed significant facilitation of their work.

Graph 1: Filling-in the questionnaires was easy or very easy for me



Graph 2: Filling-in the questionnaires was difficult or impossible for me



INTERPRETATION OF RESULTS

The novel system for electronic administration of validated questionnaires using Tablet PC was better accepted, easier to use and allowed independent completion of validated quality of life questionnaires even by elderly patients.

CONCLUSIONS

Electronic administration of validated urogynecologic questionnaires using a tablet PC is a feasible, safe, quick and relatively easy solution. Furthermore, it takes away a great burden from busy clinicians. MESS has made the method available even to elderly patients with pelvic floor disorders. It was positively accepted even by elderly patients who are not familiar with any electronic devices. With the aging of the population, it can be expected that the number of women with positive attitude towards electronic filling-in the questionnaires will increase.

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4 - VAGINAL MICROBIOTA AND GENITOURINARY SYMPTOMS AFTER FRACTIONAL CO2 LASER IN POST-MENOPAUSAL WOMEN

Filippini Maurizio, Benini Vittoria, Bonavina Giulia, Degliuomini Rebecca, Candiani Massimo, Salvatore Stefano

IRCCS Ospedale San Raffaele, IRCCS Ospedale San Raffaele, Milano, Italy, Ospedale di Stato della Repubblica di San Marino, Ospedale di Stato della Repubblica di San Marino, San Marino, San Marino

INTRODUCTION AND AIM OF THE STUDY

Genitourinary syndrome of menopause (GSM), also known as vulvovaginal atrophy (VVA), is a chronic condition secondary to hypoestrogenism after menopause and determines vulvovaginal, sexual and lower urinary tract disorders.
GSM is highly prevalent, affecting up to 84% of menopausal women, depending on the study, and its incidence even seems to be underestimated (1).
Changes in the vaginal microenvironment can contribute to the onset of genitourinary symptoms: oestrogens are, in fact, important for the deposition of glycogen in the vaginal mucosa, which is thought to protect genital tract through the production of organic acids from certain bacterial strains.
Studies using bacteriological culture techniques or molecular characterization have shown that postmenopausal women are less likely to have vaginal colonization with Lactobacillus spp, causing an increased vaginal pH that possibly makes the local environment more susceptible to infections and exacerbates genitourinary symptoms (2).
Very few studies have been conducted to compare the vaginal microbiota of postmenopausal women who receive hormonal therapy and those who do not. Treatment with systemic or topic estrogens is able to restore high proportions of Lactobacillus spp (3).
However, so far, no studies have validated the impact of microablative fractional CO2 laser therapy on the vaginal microbiota, which could be of enormous importance for all those patients who do not respond, refuse or have contraindications to hormone treatment.
The aim of this study is to evaluate the vaginal microbiota and pH in women affected by GSM, before and after repeated treatment sessions with fractional CO2 laser and to explore if there is any correlation between symptoms improvement and vaginal microbiota changes.

MATERIALS AND METHODS

In this multicentre prospective observational study, 36 postmenopausal women affected by GSM underwent vaginal microbiota and vaginal pH examinations before and after microablative fractional CO2 laser treatment. Treatment consisted of three monthly sessions on an outpatient basis. Each patient was treated with a CO2 laser system (SmartXide2 V2LR, Monalisa Touch®, DEKA, Florence, Italy) and laser energy was set at a power of 40 W and transmitted through a specific vaginal probe with a Dwell time of 1000 µs, a DOT spacing of 1000 µm, and a Smartstack parameter of 1-2 on D-Pulse mode.
Clinical evaluation of efficacy was performed during the screening visit and after each individual laser treatment. The intensity of GSM symptoms was assessed by means of a Visual Analogue Scale (VAS).
At baseline and before each treatment, pH sampling and a vaginal swab collected from the posterior vaginal fornix were obtained for the study of the microbiota.
For vaginal pH determination, we used pH indicator strips (MColorpHastTM, Merck, Germany), whereas DNA extraction of the various microoganisms, from the vaginal swabs, was performed by automated QIAGEN® extraction.
Patient satisfaction was evaluated with a Visual Analogue Scale (VAS).
A paired Student's T-test was used to compare paired data collected at different times and then a Wilcoxon test of ranks was performed to confirm the comparison. Statistical significance was set at $p<0.05$.

RESULTS

A total of 50 postmenopausal women suffering from GSM were recruited, but unfortunately 14 of them were not included in this study, because of laser treatment interruption due to the lock-down related to the Covid-19 pandemic. For this reason, 36 patients underwent a complete treatment cycle of three laser sessions and were eventually included in the study.
Regarding the composition of the vaginal flora before and after treatment, it is possible to observe that there was a statistically significant incrementation ($p<0.05$) comparing the average percentage of Lactobacillus spp before and after the three laser cycles. The most remarkable finding, however, is that of the four Lactobacillus species found to be most prevalent in healthy pre-menopausal women and therefore most likely to be protective of the changes that cause GSM, namely L. crispatus, L. gasseri, L. jensenii and L. iners, increased in percentage or appeared ex novo in 64% of the treated patients.

All GSM symptoms showed a statistically significant ($p<0.05$) improvement after the laser treatment sessions, reaching even higher levels of significance ($p <0.01$) when comparing data from baseline and follow-up visits after three laser treatments.
The mean vaginal pH measured at baseline was 6.4 ± 1.1 (mean ± SD) and decreased to 5.7 ± 0.8 after three laser treatments, showing a statistically significant improvement ($p<0.05$).
The satisfaction index was high for almost all patients. 24 patients out of 36 said they were very satisfied with the laser treatment. Only one patient declared a slight dissatisfaction.
No significant discomfort or side effects were reported, either during laser treatment or during follow-up visits.

INTERPRETATION OF RESULTS

Considering the visible changes in the bacterial species present in the vaginal microenvironment before and after treatment, the laser appears to be effective in re-establishing a microbiota more similar to that present in pre-menopause. The tissue changes induced by the CO2 laser seem to be able to promote the growth of bacterial species such as Lactobacilli, despite pathogenic strains that dominate in women suffering from vulvovaginal atrophy symptoms.
In addition to that, as already demonstrated in several previous studies, the vaginal CO2 laser is effective in the treatment of all symptoms related to the genitourinary syndrome of the menopause. In this study there was a statistically significant improvement in dyspareunia, vaginal dryness, burning and itching. In addition, as well as being effective on symptoms, the laser treatment did not cause any adverse effects or complications and virtually all patients were satisfied with it.
Lastly, treatment with vaginal CO2 laser has also been shown to modify the vaginal pH: at the end of the complete cycle of treatment, the pH dropped significantly and came closer to pre-menopausal values.

CONCLUSIONS

Vaginal CO2 laser is becoming increasingly popular as a therapeutic alternative for the management of GSM symptoms and this study is further confirmation of its efficacy. The most striking finding is the change in the vaginal microenvironment and especially the relative increase in the population of Lactobacillus spp, with a return to a microbiota similar to that of pre-menopause.
This demonstration opens up the possibility of using laser treatment for all conditions where the vaginal microbiota has been disrupted, although further studies with a larger population are needed.

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5 – WHAT WOMEN WANT NOW!!

Phillips Christian, Stevens Sally

Hampshire Hospitals, Department Of Urogynaecology, Basingstoke, United Kingdom

INTRODUCTION AND AIM OF THE STUDY

Following concerns regarding vaginal mesh and tape procedures for prolapse and stress urinary incontinence (SUI), surgeons in the United Kingdom utilise a "patient decision aid" to help women choose which procedure would be best suited to themselves, depending on their personal wishes regarding efficacy, safety and complication profile of each treatment. Both the Montgomery law ruling and the Cumberledge report have emphasised the need for surgeons to provide more thorough and comprehensive counselling for patients regarding treatment options. The paper by Robinson et al in 2003, "What women want: interpretation of the concept of cure" demonstrated that women would prefer to choose a procedure with lesser efficacy if it had a lower side effect profile. We wanted to see what level of success patients suffering with prolapse and / or SUI would find acceptable and see if there was any correlation with severity of symptoms.

MATERIALS AND METHODS

We asked 100 consecutive women with either SUI and / or prolapse attending our urogynaecology unit to complete a questionnaire. All women were either starting, or had just completed, a course of physiotherapy. The questionnaire asked the women which was their preference if the physiotherapy had failed to provide sufficient relief.

Option A: A surgical procedure which has an 80% success rate in curing symptoms, would require 1-2 day hospital stay and 2-4 week recovery. The procedure would carry a small risk of complications such as developing urgency, frequency of urine, a very small risk of needing to self-catheterise and very small risk of pain.

Or Option B: A course of outpatient, non-surgical treatments. The course of treatments would have a 70% chance of improving (but not curing) symptoms. The treatments would require no "down-time" or recovery and there were no known associated long term safety issues. They may need repeat "top up" treatments in the future and would not prevent the patient having surgery (if they wished) at a later date. Patients who chose Option B, were then asked if they would still choose that option if the success dropped to 50% or 25%. All patients were asked which factors were significant in their decision making: 1) Likelihood of improvement, 2) Complications of treatment, 3) Downtime / recovery, 4) Number of visits / treatments. A Likert scale (prolapse / bladder bother score) was used to score severity of symptoms.

RESULTS

Of the 100women, 55 had prolapse and 45 had SUI. 15 women chose Option A and 85 chose Option B. The breakdown of results are outlined in the table below.

Option	Numbers (total 100)
Option A:	15
Option B: 70% chance of improvement	85
Option B: 50% chance of improvement	73
Option B: 25% chance of improvement	36

The main factors that affected patient choice are outlined in the table below.

	Option A (n=15)	Option B (n=85)
Likelihood of improvement	13 (87%)	83 (98%)
Complications of treatment	2 (13%)	81 (95%)
Downtime / recovery	0 (0%)	28 (33%)
Number of visits	5 (33%)	3 (4%)

There was only a moderate corelation (r=0.46) between severity of symptoms and chance of success (non-surgical treatment: 25%, 50%, 70% improvement and surgical treatment: 80% cure), however all 15 women who chose Option A described their symptoms as either "severe" or "very severe" compared with only 13 (15%) of women who chose option B.

INTERPRETATION OF RESULTS

Our results suggest women with more severe symptoms are more likely to choose a surgical procedure with a higher chance of cure, whereas women with mild and moderate symptoms of SUI and prolapse are more likely to be happy with a non-surgical treatment that has a chance of improving symptoms rather than cure, with the majority (73%) still finding a 50% chance of improvement acceptable, but only 36% find a 25% chance of improvement acceptable. Efficacy was an important factor for patient choice, with fear of avoiding complications and the recovery time from surgery being major factors for women choosing option B. Women choosing a surgical treatment were less concerned about the risks of complications of surgery in the hope for cure and found the potential need for multiple treatments and lower chance of cure less appealing.

CONCLUSIONS

Historically, treatments with greatest efficacy have been advocated for patients with pelvic floor dysfunction. However, women with mild and moderate symptoms would prefer a treatment with a reduced downtime, lower risk of complications and are happy with a moderate level of improvement. These data may help us in the future when we counsel patients about various treatment options as more robust data on the safety and efficacy of new treatments become available.

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6 - A REVIEW OF CURRENT QUESTIONNAIRES AND THEIR ABILITY TO IDENTIFY PATIENTS WITH BLADDER PAIN SYNDROME AND CAPTURE THE SYMPTOMOLOGY SEQUALAE.

Patel Mittal, Coles Rebecca, Digesu Alex, Fernando Ruwan, Khullar Vik

Imperial College Healthcare NHS Trust, St Mary's Hospital, London, United Kingdom

INTRODUCTION AND AIM OF THE STUDY

Bladder Pain Syndrome (BPS), is a symptom complex with various multiple underlying pathologies, with no universally agreed definition1. It is the occurrence of persistent or recurrent pain perceived in the urinary bladder region, accompanied by at least one other symptom, such as pain worsening with bladder filling and day-time and/or night-time urinary frequency. There is no proven infection or other obvious local pathology.
Numerous questionnaires are used to assess bladder pain syndrome (BPS), with few being validated. This study examines the correlation between current symptom-based questionnaires, their ability to distinguish between those who meet the diagnostic criteria for BPS as defined by the ICS2, and their ability to capture the associated cognitive, and behavioural, sexual, or emotional consequences, as well as with symptoms suggestive of lower urinary tract and sexual dysfunction.

MATERIALS AND METHODS

Five different assessment tools were compiled into a single questionnaire and distributed amongst the general urogynaecology population. The International Pelvic Pain Society Pelvic Pain Assessment Form (IPPS), The Pelvic Pain and Urgency Frequency Patient Symptom Scale (PUF), the Interstitial Cystitis Symptom Index and Problem Index (ICSIPI), a Numeric Pain Rating Scale (NRS) and Patient Perception of Bladder Condition (PPBC) were used.
Data were encoded numerically. Spearman and Pearson correlation tests, Mann Whitney U tests, Cronbach's alpha and ROC curves were used to determine the correlation between the questionnaires, the ability of the questionnaires to determine the relationship of bladder pain with sexual dysfunction and to evaluate the ability of these tools to distinguish women with bladder pain from controls.

RESULTS

139 women completed the questionnaire. The mean age of participants was 47.2 +/- 16.5 (n=132). 50.4% completed the combined 5 tool questionnaire with no missing data.
The PUF total score and the NRS showed the strongest positive correlation (r=0.813, p<0.01) (table 1). 6 out of 6 possible pairs of the variables PUF total score, ICSIPI total score, NRS rating and PPBC were very strongly positively correlated as demonstrated by Pearson correlation tests.
Table 1: Correlations between the avriables ICSIPI total score, PUF total score, PPBC and NRS ratings (Pearson's correlation)

	ICSIPI total score	PUF total score	PPBC	NRS Rating
ICSIPI total score	1	0.808	0.740	0.716
PUF total score	0.808	1	0.713	0.813
PPBC	0.740	0.713	1	0.767
NRS rating	0.716	0.813	0.767	1

A total of 5 items from the combined questionnaire related to sexual dysfunction, 3 from the IPPS and 2 from the PUF. Using Spearman correlation tests, these items, deep pain with intercourse (r=0.48, p<0.01), pain hours or days after intercourse (r=0.61, p<0.01), burning vaginal pain after sex (r= 0.50, p<0.01) presence of symptoms during/ after intercourse (r=0.40, p<0.01) and pain/ urgency leading to sex avoidance (r=0.53, p< 0.01) showed fair to moderate positive correlation with the NRS and stronger inter-correlation (r=0.52- 0.80, p<0.01). In contrast, these items related to sexual dysfunction (deep pain with intercourse, burning vaginal pain after sex, presence of symptoms during or after intercourse and pain/ urgency leading to sex avoidance) showed no significant correlation with the PPBC and no significant correlation to weak positive correlation with the ICSIPI. The items relating to sexual dysfunction showed fair to moderate positive correlation with the PUF.
Mann Whitney U tests demonstrated that the presence of sexual activity was not significantly different between women with bladder pain and women without bladder pain but that the scores obtained from the 5 items relating to sexual dysfunction were significantly increased in women experiencing bladder pain compared to controls (p<0.05)
ROC curves demonstrated a high level of sensitivity and specificity in the PUF symptom score, PUF bother score, ICSIPI symptom score and ICSIPI problem score in distinguishing women experiencing bladder pain from women with no bladder pain.

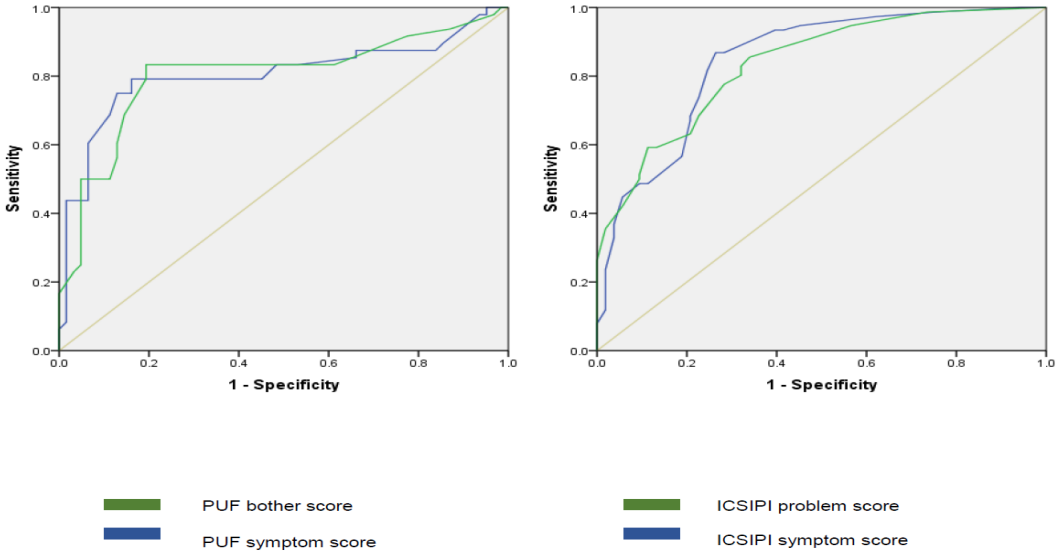

Figure 1: ROC curves demonstrating the specificity (x axis) and sensitivity (y axis) of PUF symptom scores, PUF bother scores, ICSIPI symptom scores and ICSIPI problem scores in distinguishing women with no bladder pain from women with bladder pain as determined by the NRS.

INTERPRETATION OF RESULTS

Very strong positive correlations ($r \geq 0.7$) were observed between the ICSIP, the PUF, the NRS and the PPBC. The IPPS showed weaker yet significant positive correlations with all other tools. Items relating to sexual dysfunction showed significant positive correlation with the NRS and higher scores were associated with the presence of bladder pain. The ICSIPI and PUF demonstrated a high level of sensitivity and specificity in distinguishing women in pain from controls.

CONCLUSIONS

Based on the observed correlations between different tools that vary in length, style and areas of question, there exists a need for a new questionnaire to assess the symptoms and patient impact of BPS in women that encompasses, succinctly, more of these areas. Furthermore, the association of bladder pain with sexual dysfunction highlights the need for a new tool to assess sexual dysfunction specifically in women with BPS.

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7 - DOES THE NUMBER OF MICROABLATIVE FRACTIONAL CO2 LASER SESSIONS IMPROVE SEXUAL FUNCTION IN WOMEN WITH A HISTORY OF BREAST CANCER AND IN CURRENT ENDOCRINE THERAPY?

Degliuomini Rebecca, Casiraghi Arianna, Benini Vittoria, Parma Marta, Candiani Massimo, Salvatore Stefano

IRCCS San Raffaele, Università vita-salute San Raffaele, Milano, Italy

INTRODUCTION AND AIM OF THE STUDY

Breast cancer (BC) is the most common cancer in women, with 2.3 million new diagnosis in 2020. Innovative therapies have significantly improved survival. 5 year-survival after diagnosis is currently around 90%. Current standard therapeutic approaches are chemotherapy (CT) and hormone therapy (HT) which induce menopause, resulting in oestrogen deficiency. One of the most bothersome problems during both physiological and therapy-induced menopause is vulvovaginal atrophy (VVA), affecting 25% to 50% of women. It is a direct consequence of oestrogen deprivation. VVA affects 70% of women with induced menopause after BC. VVA is associated with dryness, vaginal itching and/or stinging, dyspareunia. Collagen and elastin fiber structure of the vaginal mucosae change, resulting in reduced elasticity and decrease in mucus secretion. [1] VVA symptoms can occur sooner and be more severe in patients with CT or HT-induced menopause than in women with a physiological menopause. In last years a new terminology was used to describe symptoms that occur secondary to vulvo vaginal atrophy: Genitourinary syndrome of menopause (GSM). In women with BC history, hormonal therapies are contraindicated. Several studies have demonstrated a significant reduction of clinical symptoms related to GSM after the CO2 laser treatment and that supports its efficacy as therapy in postmenopausal cancer survivors. [2,3] Currently, in case of physiological menopause, a therapeutic protocol of 3 CO2 laser applications at monthly intervals is applied, gradually increasing energy at each application. However, in case of BC patients, still under treatment, this protocol appeared to be less effective. It is therefore worth evaluating whether a greater number of cycles would ameliorate their situation. More cycles would allow us to increase more gradually the energy used with better results. Moreover, longer duration of the cycle allows increase in energy without patients' discomfort (given the severity of the VVA). The objective of this study is, as first in literature, to investigate whether an extra 6th and 7th CO2 laser session in women with an history of breast cancer and still on endocrine therapies, with moderate to severe GSM symptoms could add to treatment's efficacy and results in favour of women's sexual function.

MATERIALS AND METHODS

This is a retrospective analysis of prospectively collected data between January 2019 and January 2020. Inclusion criteria considered were: diagnosis of breast cancer; GSM symptoms; current treatment with endocrine therapy. Exclusion criteria considered were: the use of any hormone replacement therapy within the 6 months prior to inclusion in the study; the use of vaginal moisturizers, lubricants or any other local preparation; active genital or urinary infections; positive Pap smear test; prolapse staged ≥ II according to the pelvic organ prolapse quantification (POP-Q) system [18]; serious disease or chronic condition interfering with study compliance.

Women were treated with 7 fractional CO2 laser applications (one every 4 weeks), instead of 5.

Each patient included in the study was treated with CO2 MLT system (SmartXide2 V2LR, Monalisa Touch, DEKA, Florence, Italy) using a specifically designed transvaginal probe with the following setting: power 30 Watt, dwell time 1000 μs, dot spacing 1000 μm and the smart stack parameter from 1 to 3. The transvaginal probe was gently inserted up to the end of the vaginal canal and then withdrawn and rotated at specific intervals determined by markers designed on the probe itself, in order to provide a complete treatment of the vaginal canal.

Three different time points were established for the study: baseline (T0), at week 20 (T1), at week 28 (T2). All different complaints referred by patients affected by GSM were independently assessed and scored:

- VVA (dryness, burning, itching, dyspareunia) was assessed with a measured using a 10-cm visual analogue scale (VAS).
- The Vaginal Health Index (VHI) consists of five parameters: elasticity, fluid volume, pH, epithelial integrity and moisture. Each parameter is graded from 1 to 5.
- Sexual function was evaluated with the Female Sexual Function Index (FSFI), a questionnaire specifically investigating 7 final items (desire, arousal, lubrification, satisfaction, orgasm, pain and a total score).
- For lower urinary tract symptoms (LUTS) evaluation we used the following disease specific questionnaires previously validated in Italian: the Urogenital Distress Inventory score (UDI-6) and the International Consultation on Incontinence Questionnaire-Short Form (ICIQ-SF).

Primary outcomes of our study were: evaluation of the effects of the CO2 MLT on VVA symptoms and specifically on sexual function at 28 weeks from baseline, following 7 CO2 laser sessions. Secondary outocome was the effect of this treatment on LUTS and any reported side effects.

RESULTS

Of the 27 women enrolled, twenty-three patients completed the protocol. No adverse events (AE) were reported. All women were in menopause: 39,1% (9/23) was in spontaneous menopause; 56,5% (13/23) was in pharmacological menopause; 4,3% (1/23) was in surgical menopause. All 23 patients were treated with an anti-estrogenic therapy: aromatase inhibitors (52,2%), tamoxifene (34,8%), GnRh analogues (13,0%).
A significant increase in the VHI score was observed at each time point of the study, specifically at T2. Vaginal dryness was the most common VVA symptom reported by 100% of women, while vaginal itching was the least frequent symptom (69,6%). All VVA symptoms showed a statistically significant decrease ($p<0,05$) at 20 weeks from baseline (T1) but not significant ($p>0,05$) between 20 and 28 weeks of follow up (T2).
At baseline 95,7% (22/23) of patients was sexually active, while 4,3% (1/23) reported not having sexual intercourses because of the severity of symptoms related to VVA. After one cycle of MLT the only not sexually active patient resumed coital sexual activity. Desire, arousal, satisfaction, orgasm, pain and total FSFI score increased significantly ($p<0,05$) at T1 from baseline. Lubrification, instead, was the only item to increase in a significant way at 28 weeks. However, all items (desire, arousal, satisfaction, lubrification, pain and total FSFI score) increased significantly from T1 to T2 ($p<0,05$).
For what concerns urinary symptoms, mean UDI 6 score decreased statistically significantly between T0 and T1 (p-value $< 0,05$) and between T1 and T2 (p-value $< 0,05$). Mean ICIQ-SF score decreased but not statistically significantly between T0 and T1 (p-value $> 0,05$) while it decreased statistically significantly between T0 and T2 (p-value $< 0,05$).

INTERPRETATION OF RESULTS

The results of this study suggest that vaginal CO2 laser therapy may improve desire, arousal, lubrification and satisfaction, resulting to a better sexual function of the breast cancer survivors still exposed to hormonal therapy. Vaginal CO2 laser therapy may improve also urinary symptoms, ameliorating patients 'quality of life. This effect is possibly produced in a dose-response manner. An extra 6th and 7th laser-session may add further to treatments efficacy, increasing the symptom-free percentage of participants, maintaining safety and being absolutely tolerated.

CONCLUSIONS

In women with history of BC treated with hormonal therapy, CO2 laser therapy is a mainstay, specifically different longer protocols of therapy should be taken into consideration.

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8 - IMPACT OF BACTERIAL VACCINATION IN THE MANAGEMENT OF RECURRENT URINARY TRACT INFECTIONS IN THE FRAIL ELDERLY

Lorenzo-Gomez Maria-Fernanda, Padilla-Fernandez Barbara-Yolanda, Garcia-Cenador Maria-Begoña, Flores-Fraile Javier, Valverde-Martínez Sebastian, Gonzalez-Casado Ignacio, De-Dios-Hernández Jose-Maria, Sanchez-Escudero Alfonso, Vicente-Arroyo Manuel-Jose, Martinez-Huelamo Misericordia, Herrera-Criado Filomena, Blanco-Tarrio Emilio, Marquez-Sanchez Magaly-Teresa, Flores Fraile Maria-del-Carmen, Miron-Canelo Jose-Antonio, Doyle-Sanchez Ana, Saz-Leal Paula, Casanovas Miguel

Department of Surgery, University of Salamanca, Salamanca, Spain, GRUMUR, Multidisciplinary Renal Research Group of the Institute for Biomedical Research of Salamanca, Salamanca, Spain, Inmunotek, Medical department, Alcalá de Henares, Spain, Urology Section of the Department of Surgery, University of La Laguna, Tenerife, Spain, Urology, University Hospital of Avila, Avila, Spain, Urology, University Hospital of Salamanca, Salamanca, Spain

INTRODUCTION AND AIM OF THE STUDY

Recurrent urinary tract infections (RUTI) greatly affect the frail elderly due to their high comorbidity and hospitalizations. The objective of this study was to determine the effectiveness of two inactivated whole cell bacterial formulations (MV140 and autovaccines) in the management of RUTI in this population.

MATERIALS AND METHODS

An observational, quasi-experimental study was conducted in 200 frail elderly (160 women, 40 men; 64-90 years) with RUTI. Subjects received daily sublingual MV140 (E. coli, K. pneumoniae, E. faecalis, and P. vulgaris) or autovaccine (composition obtained from patient samples) for 3 months and were followed for 12 months. The number of infections and quality of life (SF-36 questionnaire) were measured in the different study groups and compared with the previous year.

RESULTS

The mean age of patients was 82.67/80.23 years in females (♀)/males (♂). In all groups, the number of urinary tract infections (UTIs) decreased significantly after 12 months compared to the previous year without treatment: the reduction rate was between 7 and 40 times. In subjects who had not been previously vaccinated, the percentage of subjects who lost the RUTI status (3 UTIs/year) was ♀ MV140 81.7%, ♀ Autovaccine 35.0% (P <0.001 vs MV140), ♂ MV140 80.0%, ♂ Autovaccine 40.0%. Likewise, the percentage of infection-free subjects ranged from 18.3% (♀) to 40.0% (♂) for subjects receiving MV140 vs 0.0% for autovaccine. In previously vaccinated subjects, a new 3-month cycle of MV140 or autovaccines resulted in additional clinical improvement. Improvement in quality of life was also observed in each study group, and it was also significantly higher in subjects receiving MV140. No adverse reactions, either local or systemic, occurred in any of the subjects.

INTERPRETATION OF RESULTS

Different studies have demonstrated the effectiveness of bacterial vaccines in RUTI prevention, including MV140 formulation [1]. There were also those that evaluated the capacity of this polybacterial preparation in reducing kidney damage, compared to antibiotic therapy [30]. However, to date, to the best of our knowledge, there are no published studies comparing the clinical benefit of different types of bacterial immunoprophylaxis in reducing RUTI, especially focusing on elderly patients. Herein we have addressed the effectiveness of administering MV140 or autovaccines in elderly patients suffering from RUTI. Moreover, whether a new course or boost 1.5 years later provides further clinical benefit has been also evaluated.

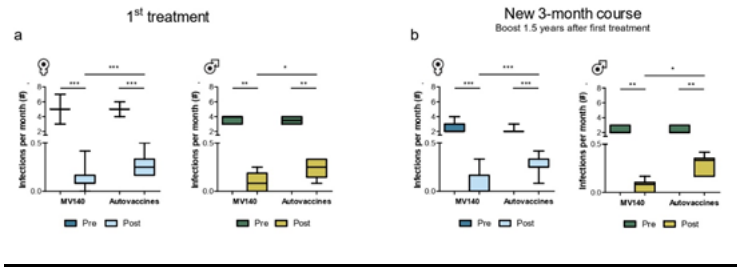
It is noted that in all groups UTI number significantly decreased upon a 3-month daily sublingual course of either MV140 or autovaccines (Table 1, Fig 1). These results support and confirm the usefulness of bacterial formulations in the prevention of RUTIs in previously published studies [2,3].

In all groups QoL SF-36 score significantly increased at 3 months respect to baseline for any medical intervention (MV140 or autovaccines). Again, this improvement was significantly higher in MV140-receiving individuals compared to autovaccines (fig 2).

CONCLUSIONS

The polybacterial vaccine MV140 and the autovaccines emerge as a relevant strategy in the management of RUTI in the frail elderly, and contribute to an improvement in the patients' quality of life. In this study, the admixture of bacteria in MV140 has shown to have higher effectiveness compared to autovaccines, regardless of gender or treatment cycle.

Fig 1 Incidence of urinary tract infections decreases following bacterial immunotherapy. (a, b) Episodes of UTI per month scored 1 month prior to immunoprophylaxis (pre) and 12 months following initiation of the treatment (post), either groups receiving treatment for the first time (a) or a new 3-month course (b) in both female (left panels, ♀, blue boxplots) and male (right panels, ♂, green boxplots). Median values and min-max ranges are shown. Normal distribution was assessed using Kolmorogov-Smirnov test. Wilcoxon test was used for within group analysis, pre- and post-treatment. U Mann-Whitney test was used for comparison between treatment groups. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.



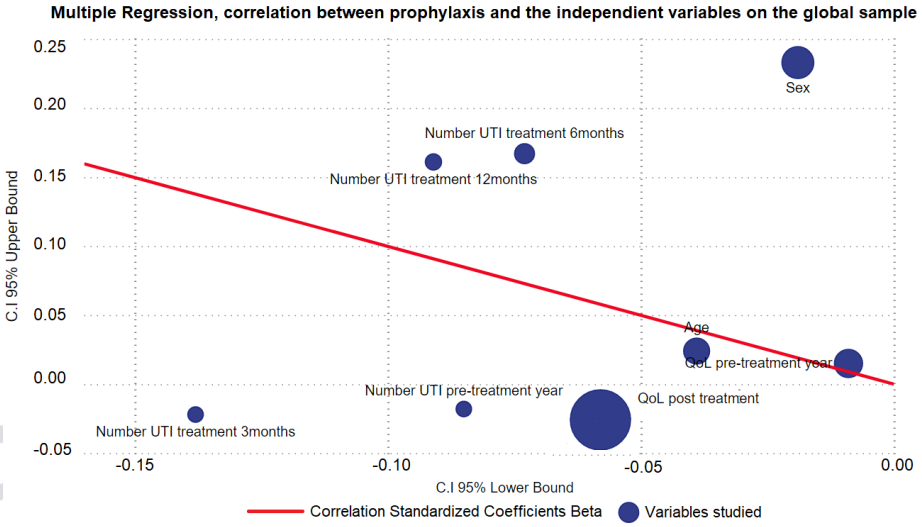


Figure 1. Multiple regression, relationship between prophylaxis and the variables age, number of UTIs and score in the QoL.

Table 1. Distribution of UTI episodes per month in study groups. Results before and 12 months following initiation of bacterial immunoprophylaxis are shown as median (min-max range).

		Female		Male	
		Before	After	Before	After
1st treatment	MV140	**5.0** (3.0-7.0)	**0.1** (0.0-0.4)	**4.0** (3.0-4.0)	**0.1** (0.0-0.3)
	Autovaccines	**5.0** (4.0-6.0)	**0.3** (0.2-0.5)	**3.5** (3.0-4.0)	**0.3** (0.1-0.3)
New 3-month course (boost)	MV140	**2.0** (2.0-4.0)	**0.0** (0.0-0.3)	**2.0** (2.0-3.0)	**0.1** (0.0-0.2)
	Autovaccines	**2.0** (2.0-3.0)	**0.3** (0.1-0.4)	**2.0** (2.0-3.0)	**0.3** (0.2-0.4)

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9 - READJUSTABLE MIDURETHRAL SLING FOR SEVERE STRESS URINARY INCONTINENCE IN WOMEN WITH HYPOMOBILE URETHRA

Ros Cerro Cristina, Escura Sancho Sílvia, Anglès Acedo Sònia, Larroya Solà Marta, Bataller Sánchez Eduardo, Amat Tardiu Lluís, Sánchez Ruiz Emília, Espuña Pons Montserrat.

Hospital Clínic de Barcelona, Gynaecology, Barcelona, Spain, Hospital Sant Joan de Déu de Barcelona, Gynaecology, Barcelona, Spain

INTRODUCTION AND AIM OF THE STUDY

In women with stress urinary incontinence (SUI) with urethral hypermobility mid-urethral sling (MUS) or a colposuspension are the most adequate procedures. However, in complex patients, when the previous surgery or other factors are limiting the urethral mobility, we should consider other treatments such as bulking agents, autologous fascial sling, artificial sphincter or adjustable slings.

Remeex® re-adjustable sling (Mechanical External Regulation; Neomedic International) is a closed system which allows the regulation of the sling tension the days after the placement or at any time during the follow-up. In our urogynecology unit, this re-adjustable sling is an option for a selected group of women with complex SUI and hypomobile urethra.

The aim of this study is to evaluate the results of Remeex® system in a group of women with a complex SUI and hypomobile urethra.

MATERIALS AND METHODS

We included patients who underwent Remeex® surgery between January 2012 and February 2020 from two different university hospitals. All women presented urodynamic SUI and a sonographic hypomobile urethra, which was considered when the distance shift between the bladder neck at rest and during straining were <5 mm (1). Patients affected with any pelvic organ prolapse and those who missed follow-up visits were not included in this study. The study was approved by the Hospital Institutional Ethics Committee and informed consent was obtained from all patients.

Demographic characteristics, gynecological history and previous anti-incontinence surgeries were recorded. For the evaluation of the symptoms of urinary incontinence we used the Incontinence Questionnaire-Short Form (ICIQ-UI-SF) with scores ranging from 0 to 21 points. We classified the severity of the urinary incontinence in the following intervals according to the ICIQ-UI-SF: slight (1-5), moderate (6-12), severe (13-18), and very severe (19-21) (2). Patient satisfaction after surgery was assessed by Patient Global Impression of Improvement scale (PGI-I). In all women a 3-day bladder diary, a 24 hour-pad weight test, a pelvic physical examination and an International Continence Society (ICS) Uniform Cough Stress Test (ICS-UCST) were performed. All patients had a urodynamic evaluation including: Uroflowmetry, Post Void Residual (PVR), Cystometry, Pressure-flow study and Urethral Pressure Profile (UPP). Intrinsic sphincter deficiency (ISD) was defined as a maximal urethral closure pressure (MUCP) of 20 cmH2O or less. Urethral mobility was assessed by pelvic floor transperineal ultrasound (2D-TPUS), in the mid-sagittal plane.

Statistical analysis was performed with the SPSS software package (version 19.0, SPSS Inc., Chicago, IL, USA).

RESULTS

A total of 90 patients with complex SUI, who underwent Remeex® surgery were included with a median follow-up of 56.4 (24.0) months. The mean score of the ICIQ-UI-SF was 18.1 ± 2.6 points and the mean 24 hour-pad weight test was 273.6 ± 320 grams. Only 22.7% of the patients complained of pure SUI symptoms and 77.3% of the patients complained of concomitant urgency incontinence according to the dimension of symptoms of ICIQ-UI-SF. Sixty-six (59.4%) of the 90 patients had a previous anti-incontinence surgery, being MUS 44.1% of those. Twenty-four women without previous anti-incontinence surgery, with urethral mobility <5 mm measured by 2D-TPUS, were also treated with this readjustable sling. The reasons for the hypomobile urethra in these patients were the periurethral fibrosis due to a previous anterior colporrhaphy in twenty cases and pelvic radiotherapy in four cases. All patients had a urodynamic SUI, 26% of them had an associated detrusor overactivity (DO) and/or low bladder compliance and 14% voiding dysfunction due to a hypoactive detrusor. ISD was observed in 47% of the 90 patients.

Major surgical complications occurred in 18 patients (20%), reported as bladder perforation during sling placement, surgical wound infection and tape exposures to the vagina. Minor complications occurred in 18 patients (20%), reported as postoperative urinary retention, urinary tract infections and postoperative pain.

Subjective success measured by answering the PGI-I as (Very much better/Much better/A little better) was 70% (63 patients). There was a mean decrease of ICIQ-UI-SF score after surgery of 9,4 ± 7.0 points. A decrease of the severity of de IU according to ICIQ-UI-SF score was observed in 69 patients (76.7%) (Figure 1).

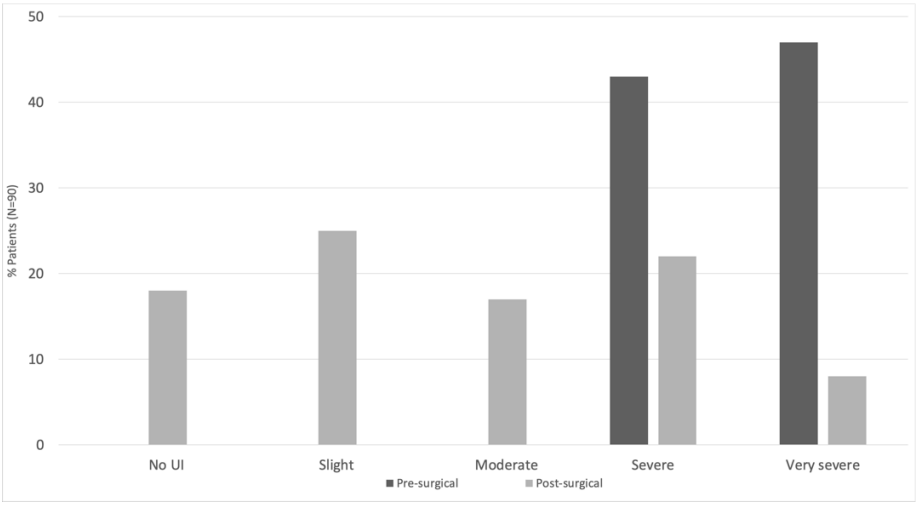

Figure 1. Comparison of ICIQ-UI-SF score of women underwent Remeex® surgery, before and after the procedure, sorted by severity.

Additionally, a mean reduction of 109.6 ± 291.4 grams in the post-surgical 24 hour-pad weight test was observed. Urodynamics one-year after surgery (performed in 59 patients) revealed cure of the urodynamic SUI (negative stress test at maximum cystometric capacity) in 15 (25.4%) of the 59 patients. A persistency or de novo DO was observed in 19 (32.2%) of the 59 patients.

When we compared women with post-surgical decreased severity of de urinary incontinence with those without urinary incontinence severity changes, we found lower mean BMI (28.2 ± 4 kg/m2 vs. 30.5 ± 4.6 kg/m2, p = 0.028) and 24 hour-pad weight (188.0 ± 244.6 g vs. 385.1 ± 366.6 g, p = 0.027) in the first group.

INTERPRETATION OF RESULTS

Surgical treatment of women with complex SUI and an hypomobile urethra is a challenge. In these complex group of women, the preoperative assessment with a combination of clinical evaluation, 24 hour-pad weight test, urodynamics and pelvic floor ultrasound, allow us to select patients who are not candidates for MUS. In these cases, the election of the type of surgery is based in the resources available, the experience of the surgeons and the preferences of the patient.

In this group of complex SUI patients, operated with a readjustable sling procedure (Remeex®), we observed a statistically and clinically significant decrease in ICIQ-UI-SF score after surgery in more than three-quarters and a subjective success rate of 70%.

CONCLUSIONS

In our sample of patients with complex SUI, all with sonographic hypomobile urethra and nearly half with ISD, the surgical treatment with a readjustable sling (Remeex®), shows a limited objective cure of urodynamic SUI. However, the objective improvement of the urinary incontinence severity scores are acceptable and the subjective success rate was good considering the severity and complexity of their SUI.

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10 - VAGINAL ERBIUM LASER FOR SUI - A PROSPECTIVE MULTICENTRE RANDOMIZED PLACEBO-CONTROLLED TRIAL TO EVALUATE EFFICACY AND SAFETY OF NON-ABLATIVE ER:YAG LASER FOR TREATMENT OF STRESS URINARY INCONTINENCE

O'Reilly Barry, Phillips Christian, Toozs Hobson Philip, Kuhn Annette, Volker Vierek, Atheanasiou Stavros, Lukanovic Adolf, Lukanovic David, Palmer Brendan, Dahly Darren, Koron Neza, Cardozo Linda

Athens university Hospital, Athens university Hospital, Athens, Greece, Basingstoke Hospital, Basingstoke Hospital, London, United Kingdom, Birmingham Womens Hospital, Birmingham Womens Hospital, Birmingham, United Kingdom, CUMH, CUMH/MPH, Cork, Ireland, Fotona, Fotona, Lubijana, Slovenia, Kantonsspital Frauenfeld, Kantonsspital Frauenfeld, Frauenfeld, Switzerland, Kings College Hospital, Kings College Hospital, London, United Kingdom, UCC, Department of statistics, UCC, Cork, Ireland, UCC, dept of statistics, UCC, Cork, Ireland, Universitatsspital Bern, Universitatsspital Bern, Bern, Switzerland, University of Slovenia, University of Slovenia, Lubijana, Slovenia

INTRODUCTION AND AIM OF THE STUDY

Transvaginal laser therapy has been gaining in popularity but robust clinical trials have been lacking[1]. This is the first multicentre placebo controlled single blinded trial to date performed to examine effect of laser therapy for stress urinary incontinence (SUI). The aim of this study is to evaluate efficacy and safety of the FotonaSmooth® device in the treatment of SUI .

MATERIALS AND METHODS

Eligible patients with diagnosed USI were enrolled from eight specialist centres in Europe and were randomly allocated into active and sham group with 2:1 ratio according to CONSORT guidelines. Power calculation yielded a sample size of 69 active and 35 sham patients (104 patients) with 120 recruited to compensate for the expected 15% drop-out rate. The active group received an active laser therapy using the Er:YAG laser (IncontiLase® protocol, Fotona, Slovenia), while the sham group received treatment in which the laser light was physically blocked from reaching the tissue (single blinded). Participants received two treatments one month apart and data was collected at baseline and 6 months (and 12 months in the active group) and included 1h pad weight test; leakage frequency as recorded by 3-day bladder diary, cough stress test in standing and lithotomy position, ICIQ-UI SF, PISQ-12, KHQ and PGI-I. Primary outcome measure was standardized 1h pad weight test at 6-month follow up, where a treatment success was defined as a change in pad weight that represented a > 50% reduction from baseline (as per FDA guidelines). Patients were monitored for discomfort and adverse effects during the treatment and follow-up periods.

RESULTS

110 patients with SUI were finally recruited between October 2015 and October 2019, 73 were in the active group and 37 in the sham group. Summary of the results is presented in Table 1. A treatment success (> 50 % reduction in pad weight) was observed in 36 % of patients from sham group (n=12), and in 58 % of patient in active group (n=33). Analysis of the primary outcome (Figure 1, Table 1) concluded that the odds of treatment success was approximately three times greater in the active arm vs the sham arm (OR 3.11, 95% CI 1.15-9.06, p-value = 0.03). The results were similar after adjustment for key prognostic factors, or exclusion of severe cases (baseline pad weight > 50g). Similarly, the geometric mean of pad weights at 6 months in the active arm was 78% less than that of the sham arm. Results of KHQ, PISQ-12 and PGI-I showed that the odds of improved patient outcomes are significantly greater in active arm relative to sham study arm (Table 1). 21 patients reported adverse events that were classified as possibly or probably related to device or intervention, were transient and most frequently resolved in up to 8 days' time.

INTERPRETATION OF RESULTS

Non-ablative Er:YAG laser therapy significantly improves SUI symptoms as measured by the standardized 1h pad weight test and several patient reported outcomes.

CONCLUSIONS

We can conclude that non-ablative Er:YAG laser therapy should be offered as a non-surgical treatment option for patients suffering from SUI, with minimal adverse effects observed and reported elsewhere [2].

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Disclosures:

Funding Fotona d.o.o Slovenia supplied the laser equipment for the study Clinical Trial Yes

Table 1: Summary of study results.

Outcome Measure	Timepoint	Observations (n)		Active				Sham				Active vs. Sham	p
		Active	Sham	Median	Min	Max	IQR	Median	Min	Max	IQR		
Pad weight (g)	Baseline	72	37	6.5	0	203	16.6	6.0	0.06	174	13.0	OR = 3.11 [1.15–9.06]	**0.030**
	6 month follow-up	57	33	1	0	222	4.4	5	0	65.1	10.4		
	12 month follow-up	41	NA	1	0	174	13.3	NA	NA	NA	NA		
3-day bladder diary	Baseline	66	34	1.67	0	9	2	1.84	0	7.33	1.58	IRR = 0.70 [0.45–1.11]	0.125
	6 month follow-up	44	22	0.5	0	6.3	2	1.16	0	9.3	1.34		
ICIQ-UI SF	Baseline	68	34	11	5	21	8	12	4	20	5	OR = 0.50 [0.22–1.10]	0.084
	6 month follow-up	56	33	9	0	20	6	10	0	18	6		
KHQ Part I	Baseline	70	34	91.6	0	200	33.4	95.8	25	150	43.8	OR = 0.32 [0.13–0.77]	**0.012**
	6 month follow-up	56	30	58.3	0	150	58.3	79.2	0	125	39.6		
KHQ Part II	Baseline	69	34	208	52.7	658	253	266	16.6	566	230	OR = 0.41 [0.17–0.99]	**0.048**
	6 month follow-up	55	29	133	0	672	153	216	0	500	208		
PISQ-12	Baseline	66	35	36	7	46	7	36	9	45	9.5	OR: 2.5 [1.04–6.01]	**0.040**
	6 month follow-up	45	28	39	22	44	6	36.5	22	46	9.25		
PGI-I	Baseline	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	OR: 0.27 [0.11–0.65]	**0.030**
	6 month follow-up	50	33	3	2	6	2	4	2	5	0		

ICIQ-UI SF International Consultation on Incontinence Questionnaire-Urinary Incontinence Short Form, *KHQ* King's Health Questionnaire, *PISQ-12* Pelvic Organ Prolapse Urinary Incontinence Sexual Questionnaire short form, *PGI-I* Patient Global Impression of Improvement, *IQR* interquartile range

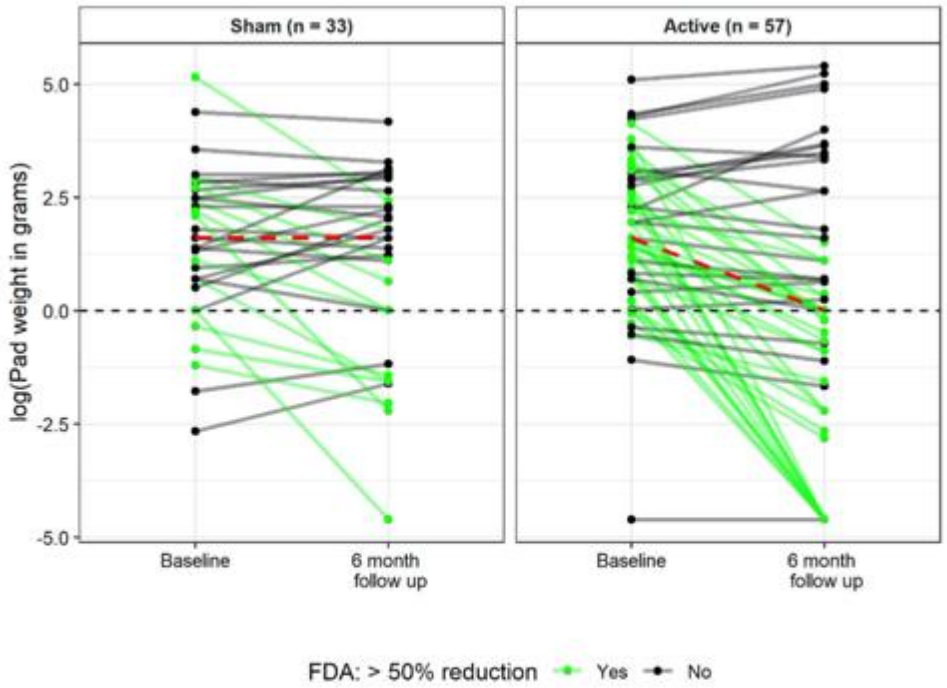

Fig. 1. Distributions of baseline and 6 month follow-up 1-hour pad weights by trial arm. Raw data values (grams) were positively skewed and corrected using logarithmic transformation. Individual patient progression is visualised according to the FDA guidelines of "clinically meaningful level of improvement in pad weight as greater than 50% reduction from baseline". Red dashed line identifies median pad weight.

11 - A PILOT STUDY INTO THE RELATIONSHIP BETWEEN ANXIETY AND PROCEDURE RELATED PAIN IN WOMEN UNDERGOING OUTPATIENT CYSTOSCOPY AND INTRAVESICAL BOTOX.

Wilson Nicola, Mutema Eric

Blackpool Teaching Hopstials NHS Foudation Trust, Obstetrics and Gynaecology, Blackpool Victoria Hospital, Blackpool, United Kingdom,

INTRODUCTION AND AIM OF THE STUDY

Intravesical BOTOX is a standard treatment for patients with overactive bladder symptoms (OAB) that do not respond to conservative management or medication. Although the technological improvements have greatly reduced the patient pain and discomfort during outpatient cystoscopy, pain still remains a significant determinant of this procedure's general acceptability. It is unclear to what extent anxiety may affect the pain experienced by patients during this procedure.

OBJECTIVE:

Our research aim was to determine if preprocedural anxiety levels had a significant association with procedure-related pain perception in women undergoing outpatient cystoscopy and intra-vesical BOTOX as a treatment for OAB.

MATERIALS AND METHODS

We conducted an observational prospective cohort study which included 61 outpatient procedures performed on 49 patients attending the Urogynaecology clinic at a single centre. Patient were asked to complete the General Anxiety Disorder-7 questionnaire (GAD-7) to evaluate their usual anxiety state prior to the procedure. They were then asked to quantify on a visual analogue scale (VAS) the pain felt during the procedure. Associations between GAD-7 scores and VAS scores were assessed using correlation analysis.

RESULTS

The preprocedural mean GAD-7 score was 5.06 (SD 5.2). The mean VAS score was 3.18 (SD 1.95). Correlation analysis revealed a very weak correlation between GAD-7 score and VAS score, with a correlation coefficient r=0.20. There was no significant difference in anxiety in those attending for their first cycle of BOTOX, (mean GAD-7 score 4.45, CI 1.29-7.61) and those attending for repeat cycles (mean GAD-7 score 5.2, CI 3.89-6.50). There was also no difference in the pain score between these two groups where the average score for both groups was 3.18.

INTERPRETATION OF RESULTS

This study shows there is only a very weak correlation between anxiety, as measured by GAD-7 and patient perceived pain in women undergoing outpatient cystoscopy and intravesical BOTOX, which is unlikely to be clinically significant.

CONCLUSIONS

These results suggest that pre-procedure anxiety is not a contraindication to Outpatient BOTOX treatment for OAB. While reducing anxiety will have a positive psychological impact on women undergoing outpatient cystoscopy, this study suggests it is unlikely to affect their perception of procedure related pain.

12 - PREOPERATIVE ABDOMINAL STRAINING IN UNCOMPLICATED STRESS URINARY INCONTINENCE: IS THERE A CORRELATION WITH VOIDING DYSFUNCTION AND DE NOVO OVERACTIVE BLADDER AFTER MID-URETHRAL SLING PROCEDURES?

Cimmino Chiara, Iacovelli Valerio, Scancarello Chiara, Gubbiotti Marilena, Bianchi Daniele, Braga Andrea, Turbanti Andrea, Finazzi Agrò Enrico, Serati Maurizio

Ente Ospedaliero Cantonale, Ente Ospedaliero Cantonale, Mendrisio, Switzerland, Ospedale San Donato, Ospedale San Donato, Arezzo, Italy, Università Tor Vergata, Policlinico Tor Vergata, Roma, Italy, University of Insubria, Filippo Del Ponte Hospital, Varese, Italy

INTRODUCTION AND AIM OF THE STUDY

To evaluate the role of preoperative abdominal straining in predicting de novo overactive bladder (OAB) and voiding dysfunction in female patients undergoing suburethral taping by trans-obturator approach (TVT-O) for uncomplicated stress urinary incontinence (SUI)1,2.

MATERIALS AND METHODS

Data from patients who underwent TVT-O surgery for SUI were retrospectively analyzed. Inclusion criterion was history of pure SUI. Exclusion criteria included: previous surgery for urinary incontinence, pelvic radiation, pelvic surgery within the last 3 months, and anterior or apical pelvic organ prolapse (POP) ≥ +1 cm. Voiding dysfunction has been defined through symptoms and or urodynamics signs. Patients were divided into group A and group B according to the presence of abdominal straining during urodynamics (UDS). Patients were observed clinically and with UDS at a 3-year follow-up.

RESULTS

192 patients underwent TVT-O surgery for uncomplicated SUI. Preoperative abdominal straining was identified in 60/192 patients (Group A: 31.2% vs Group B: 68.8%). At baseline, Qmax was not different in the two groups (Group A: 19,5 vs. Group B: 20,5 ml/s, p=0.76). Demographics was similar in the two groups regarding age, parity. At 3 year follow up, voiding dysfunction was reported in Group A: 9 and Group B: 8 patients (p=0.056), de novo OAB was significantly reported in Group A: 23 and Group B: 26 patients (p=0.007).

INTERPRETATION OF RESULTS

Our data showed a significant relationship between preoperative abdominal straining and postoperative de novo OAB, leading to consider them as able to overlap mild forms of voiding dysfunctions without high PVR, although a significant correlation was not assessed (p=0.056), probably due to our small sample size. Preoperative abdominal straining can be considered as a new urodynamic feature that should be taken into consideration once investigating a patient undergoing SUI surgery, in order to ameliorate counseling leading to alternative therapeutic options. Although a prospective, well powered and randomized clinical trial would have been more helpful in the comprehension of the role of abdominal straining, we tried to carry out a hypothesis-generating retrospective analysis in order to explore its possible relationship with the incidence of de novo OAB and voiding dysfunctions. This implies that our results cannot lead to a confirmatory cause-effect relationship. However, the 3-years follow up provides information about long term de novo OAB and voiding dysfunctions in uncomplicated SUI patients.

CONCLUSIONS

Preoperative abdominal straining was found to be related to a significant incidence of de novo OAB after mid-urethral sling. A significant correlation was not assessed for postoperative voiding dysfunction. Further studies may better define the impact of preoperative abdominal straining.

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Table I: Baseline characteristics. Data are expressed as mean and percentage (%) or mean and range (range); BMI = Body Mass Index.

	Abdominal straining (group 1) N = 60	No abdominal straining (group 2) N = 132	p-value

Age (years)	64 (40-76)	62 (44-72)	0.87
BMI (kg/m2)	25.3 (23 – 28)	25.8 (21-30)	0.41
Obese (BMI ≥ 30 kg/m2)	8 (13%)	19 (14%)	0.77
Menopausal	46 (70%)	101 (76.5%)	0.88
Previous vaginal deliveries	1 (1 – 2)	1 (1-2)	0.56
Operative delivery (vacuum/forceps)	4 (6.6%)	6 (4.5%)	0.43
Previous radical pelvic surgery	4 (6.6%)	11 (8.3%)	0.66

Table II: Urodynamics (UDS) data.

	Baseline	3-yr follow up	p-value
FDTV (mL)	180 (50 – 430)	165 (50-410)	0.76
CC (mL)	480 (220 – 500)	410 (190-500)	0.09
PDetMax during filling (cmH2O)	8.4 (3 – 15)	10.9 (3-21)	0.04
Qmax (mL/s)	21 (7 – 77)	19 (5-65)	0.43
I-OpenP (cmH2O)	23.4 (9 – 66)	24.1 (10-71)	0.88
PDetMax during voiding (cmH2O)	31.5 (10 – 75)	34.8 (10-65)	0.12
PDetQMax (cmH2O)	24.4 (8 – 60)	27.1 (9-67)	0.47

13 - LONG-TERM OUTCOMES OF TENSION-FREE VAGINAL TAPES FOR STRESS URINARY INCONTINENCE

O'Leary Bobby, McCreery Alexandra, Redmond Aisling, Keane Declan

National Maternity Hospital, Urogynaecology, Dublin, Ireland

INTRODUCTION AND AIM OF THE STUDY

Stress urinary incontinence (SUI) represents a vast disease burden to women internationally, affecting up to 1 in 3 adult women (1). Synthetic mid-urethral slings have been long established as an effective surgical intervention in women with SUI who are refractory to pelvic floor physiotherapy. Chronic pain, dyspareunia, and mesh erosion have been reported—albeit at a low level—across all centres performing these procedures (2). Unlike most other countries, these complications have resulted in a temporary pause on mesh-related procedures in the United Kingdom and Ireland while guidelines for their future use and for management of complications are developed. Other procedures that exist for the treatment of SUI, such as the autologous fascial sling or Burch colposuspension are not without morbidity and the synthetic mid-urethral sling is likely to remain an important treatment modality for female SUI into the future. Thus, the aim of this study was to assess the presence of long-term complications and patient satisfaction for the retropubic tension-free vaginal tape (TVT).

MATERIALS AND METHODS

This was a cross-sectional study. Women who had a tension-free trans-vaginal tape (TVT) from 1999 to 2004 were identified from operating theatre records. Only women who had a tape inserted using a retropubic approach were included. Each woman's general practitioner was contacted to assess if the woman was alive, and if there were any concerns with her ability to complete a questionnaire.

ICIQ modules on female lower urinary tract symptoms (ICIQ-FLUTS), urinary incontinence (ICIQ-UI), and lower urinary tract symptoms quality of life (ICIQ-LUTSqol) were posted to each woman. There was no follow-up of non-responders. Ethical approval was granted by our hospital's institutional research ethics committee (ref: EC11.2020). Statistical analysis was performed using R4.0.2 (R Foundation for Statistical Computing, Vienna, Austria).

RESULTS

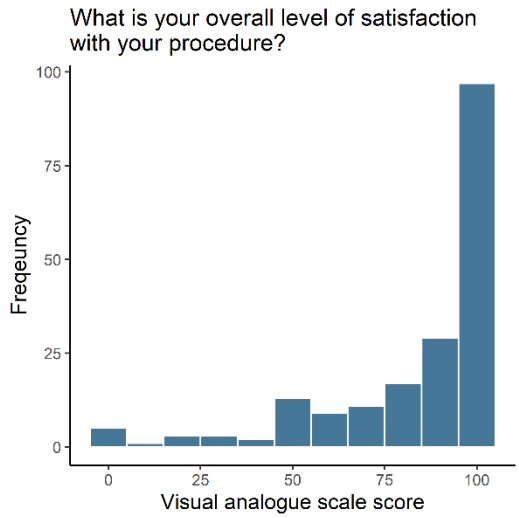
From 1999 to 2004, 398 women were identified from the operating theatre records as having a retropubic tension-free transvaginal tape for stress urinary incontinence. Of these, 48 (12.1%) were reported as being deceased. Questionnaires and study information packs were sent to the remaining 350 women. Completed questionnaires were returned by 196 women, giving a response rate of 56.0% (196/350). The median (range) ICIQ-FLUTS filling, voiding, and incontinence scores were 4 (0–13), 1 (0–10), and 3 (0–20). The median (range) score in this questionnaire was 5 (0 - 21).

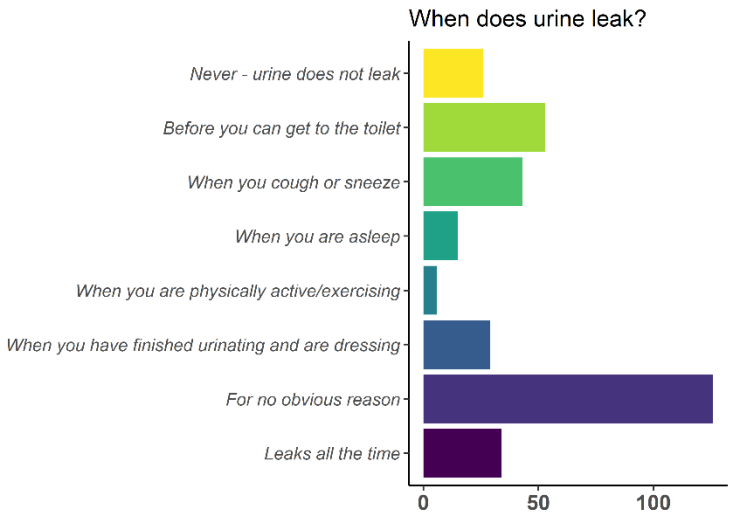
Some degree of urgency was reported by 80.6% (158/196) of women, though only 5.6% (11/196) describing this as occurring "all of the time". Nearly three-quarters of women denied any bladder pain (71.9%). Of those who did describe pain, none reported it as constant, and only four women (2.0%) reported it as occurring "most of the time". Urinary frequency of up to 8 times per day was reported by 70.9% (139/196) of women. Severe frequency (13 or more times per day) was seen in 6.6% (13/196) of women.

Over half of women denied a delay prior to micturition (113/196), and only four women (1.5%) described this as a constant phenomenon. One-in-five women (38/196) described a need to strain to urinate, though only 4.1% (8/196) reported straining "most of the time" (6) or "all of the time" (2).

Over 80% of women reported leaking before they could make it to a toilet, with one in seven women (15.3%) describing this as occurring most or all of the time. One quarter of women (44/196) denied any urinary incontinence while half of women (97/196) described leaking once or twice per week. Over one-third of women denied leaking with physical activity (76/196) and another third (61/196) reported leaking only "occasionally". Eight women (4.1%) described constant leaking while physically active. When asked when urinary incontinence occurred, nearly two-thirds (64.3% [126/196]) reported it as occurring "For no obvious reason".

When asked if they would choose to have their TVT procedure again, 86.7% (170/196) of women answered "Yes", 7.7% (15/196) reported "No", and the remaining 5.6% (11/196) did not answer the question. The median overall satisfaction with the procedure—when assessed using a visual analogue scale from 0-100—was 98 (0–100).





INTERPRETATION OF RESULTS

This long-term follow up study shows that the TVT is a highly effective procedure for the treatment of SUI with a high rate of patient satisfaction. Stress urinary incontinence symptoms remain low 15-20 years after the initial procedure. The prevalence of overactive bladder or urge urinary incontinence is high, though this is confounded by the advancing age of participants. Levels of dyspareunia are minimal, suggesting a low level of mesh erosion. Similarly, voiding dysfunction is uncommon, with very few women describing a need to strain to urinate. Satisfaction rates are high, and the vast majority of women would opt to have their procedure again.

CONCLUSIONS

The retropubic tension-free transvaginal tape has high levels of satisfaction 15-20 years after initial placement. Symptoms of SUI remain low, with minimal levels of dyspareunia or voiding dysfunction. Levels of urgency and overactive bladder are high, though may be due to the advancing age of women rather than the procedure itself. Given these results, the TVT should be continued to be considered for the treatment of female stress urinary incontinence following adequate patient counselling.

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14 - PLATELET RICH PLASMA AS ADJUVANT THERAPY OF RECURRENCE VESICOVAGINAL FISTULA

Streit- Cieckiewicz Dominika, Kolodynska Aleksandra, Rechberger Tomasz, Futyma Konrad

Second Department of Gynecology, Medical University in Lublin, Lublin, Poland

INTRODUCTION

A vesicovaginal fistula (VVF) is a non-physiological communication between bladder and vagina, resulting in uncontrollable, often constant, leakage of urine through the vagina. Urinary fistula is a burdensome and debilitating complication after gynaecological procedures. It is estimated that 85% all of VVFs appear as a complication of transabdominal hysterectomy (1.4/1000 procedures) or transvaginal hysterectomy (0.2/1000 procedures), and 11% develop after caesarean section. Vesicovaginal fistula can also be associated with uterine cavity curettage, cone biopsy, stress urinary incontinence procedures, laparoscopic hysterectomy or may also be a late consequence of oncological radiotherapy [1].

According to the WHO, successful closure rate for a first repair is around 85% [2]. However, it is still a challenging procedure for patients and surgeons, and new treatments are being developed. Since the first use of fibrin glue to close the post radiation VVF in 1970s, several methods and different plasma concentrates have been applied as salvage treatment for urogenital fistulas [3]. Nowadays, there are numerous reports on the use of platelet preparations in regenerative medicine. They are also increasingly used in gynecology, i.e.: in plastic and reconstructive surgery or stimulation of the healing process and regeneration of the vaginal mucosa [4]. Platelet Rich Plasma (PRP) is an autologous concentrate of thrombocytes in small volume of plasma, which contains from 5 times to 16 times higher concentration of platelets than physiological, and higher concentration of growth factors localized in platelets granularities, which play the most important role in wound healing.

Classification of PRP, based on cell-type content (i.e., platelets, leukocytes) and fibrin density, was proposed by Dohan Ehrenfest et al., and divides the platelet-based concentrates into four types (Table 1) [5].

Table 1. Classification of platelet-based concentrates as proposed by Dohan Ehrenfest et al. [5].

Preparation	Acronym	Leucocyte count	Fibrin density
Pure platelet-rich plasma	P-PRP	Poor	Low
Leukocyte- and platelet-rich plasma	L-PRP	Rich	Low
Pure platelet-rich fibrin	P-PRF	Poor	High
Leukocyte- and platelet-rich fibrin	L-PRF	Rich	High

OBJECTIVE:

The aim of our study is to evaluate the efficacy of PRP use as a supportive agent in the treatment of recurrent VVF after unsuccessful surgical attempts.

METHODS:

Between January 2018 and May 2021, 36 patients with VVF underwent the Latzko procedure in the Department of Gynecology. In 13 cases, surgery was successful after first attempt, in 2 cases, surgery was successful after second Latzko procedure, but in 21 cases (Table 2), 2 attempts to close the VVF failed. Those patients were injected with PRP and underwent a repeated Latzko surgical procedure 6-8 weeks later. All patients signed informed consent and agreed to the use of this data for scientific purposes. The Local Ethics Committee approved the study concept (KE-0254/363/2018). Whole blood was collected from the patients into sodium citrate tubes (ratio 9:1). In 21 cases, the tubes were centrifuged using the Arthrex Angel System kit® (Arthrex Inc., Naples, USA), resulting in 4-6 ml PRP volume. In 3 cases, the tubes were centrifuged by means of the A-PRP Novareg System kit®, resulting in 6-7ml PRP. During PRP injection, the patients were in the lithotomy position, the vaginal orifices of the fistula were localized and then the edges of the fistula were injected at 5 points. After the injection, patients were prescribed ciprofloxacin 500mg bid for 5 days and discharged home. During follow-up surgery, their ureters were catheterized with single J's catheters in order to reduce urine inflow into the bladder, The SJs were left for 12 to 14 days, as were the bladder catheters. Patients were then discharged home after initial continence check-up with methylene blue instillation.

For the purposes of the study, patients were divided into three groups: group A: patients closed after first Latzko procedure, group B: closed after second Latzko procedure, and group C: closed after PRP injection and/or following Latzko procedure. The demographic data of patients are given in Table 2. The data was statistically analyzed using the Kruskal Wallis test and Student's test.

RESULTS:

In 1 patient, the VVF was closed after only one PRP injection and no subsequent surgery was necessary. At follow-up visit, 4-6 weeks after surgical closure of VVF, 19 out of 21 PRP patients (90,4%) remained dry without any symptoms of VVF. In the patients, during the gynecological examination, their vaginal walls were found to be healed without any contraction. In 1 patient, a second PRP injection was needed due to the unusual localization and large size of VVF, and this patient needed a second surgical closure of VVF.
Statistical significance ($p>0,05$) was demonstrated only in terms of BMI in group A, compared to group C. Patients who succeeded with the fistula closure after first surgical procedure had significantly higher BMI when compared with patients who required PRP injection prior to surgical procedure. Age and fertility did not demonstrated statistical significance.
Table 2. Average demographic data of patients

Group	n	Age (years ±SD)	BMI (kg/m^2 ±SD)	Parity (mean ±SD)	Vaginal delivery (mean ±SD)	Cesarean delivery (mean ±SD)
A	13	54.0±10.0	29.8±5.1	2.2±2.6	2.1±2.4	0.1±0.3
B	2	58.0 ± 6.0	27.1±2.26	1.5 ±0.7	1.5±0.7	0.0 ± 0.0
C	21	53.0±16.0	25.9±4.0	1.1±0.7	1.0±0.7	0.2±0.4

CONCLUSIONS:

PRP in urogynecology can be used as a supporting treatment prior to VVF surgical procedure (which is still the leading method applied in this condition) to improve the effectiveness of VVF surgical treatment. The noted higher patients quality of life, higher success rate and shorter healing process of VVF are encouraging and we now usually incorporate this method in our clinical practice.

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15 - NEW TREATMENT APPROACH FOR FEMALE SEXUAL DYSFUNCTION AND SUI BY TRANSVAGINAL SHOCKWAVE THERAPY (TVST)

Zoumpos Dr. Ioannis

Engineer, Medical Technology, Petach Tikva, Israel, Private Urology Practice, Clinic, Thessaloniki, Greece

INTRODUCTION AND AIM OF THE STUDY

This is a pilot study designed to evaluate the therapeutic effects and safety of low intensity shockwaves, when applied for treatment of sexual dysfunction symptoms and utilizing a novel transvaginal shockwave transducer designed to deliver therapeutic transvaginal shockwaves - TVST, in addition to transdermal application.
As women go through childbearing, hormonal changes and aging, they can experience changes in their genitalia. Changes that can impact a woman's quality of life include postmenopausal vulvovaginal symptoms (i.e. dryness, burning, itching), vaginal laxity, stress urinary incontinence, a decrease in desire, sensation and tone of the external genitalia.
Lately, a series of energy-based devices for rejuvenation of vaginal tissue have been introduced. Laser and radio frequency energy devices are used to produce controlled heat which is applied to the vaginal tissue, stimulating collagen, regenerating contracture of elastin fibers, producing neovascularization, and improving vaginal lubrication.
Low intensity shockwave therapy is a novel treatment modality developed in recent years. In this modality the energy delivered to the patient is generated by shockwaves and results in activation of vascular growth factors (VEGF) [1] and of gene expressions of collagen types I and III. As no tissue heating is involved, this treatment has a potentially higher safety profile for patients.
Although several studies have been performed in recent years demonstrating clinical improvement for women suffering from vulvodynia and urinary incontinence [2], technological constraints have not previously allowed for low intensity shockwaves to be applied transvaginally.The aim of this study was to assess the clinical benefits of TVST for women patients suffering from sexual dysfunction while reviewing treatment and application ease, patient comfort and safety characteristics.
Our expectation was that our treatment protocol would:

- Stimulate the release of growth factors in vaginal tissue, resulting in the generation of new blood vessels
- Enhance sensitivity in the vagina to improve sensation
- Increase natural lubrication production

MATERIALS AND METHODS

For this study we used the MoreNova-FEM (Hikkonu Ltd.) low intensity shockwave device, which delivers large-area, low-intensity shockwaves that simultaneously treat large bodies of tissue. This differs from conventional shockwave systems that utilize sources focusing therapeutic shockwaves on a small area of targeted tissue.
Furthermore, we explored the unique characteristic of the system's treatment probes, as being narrow enough to allow a transvaginal application. The possibility to apply shockwaves to the vaginal wall provides an added therapeutic benefit for strengthening vaginal connective tissue, generating collagen with emphasis on tissue proximal to the urethra.

This pilot study was conducted between February-August 2021 and 15 female patients diagnosed with sexual dysfunction with ages ranging between 45-61 were recruited. All participants signed the appropriate informed consent forms.

Patients received TVST treatments twice a week for 3 consequitive weeks totalling 6 treatment sessions per patient. Each treatment session included administration of low intensity shockwaves to 6 different regions: 2 applications were transvaginal (11 and 1 o'clock positions) and 4 were transdermal: bilateral application to the labia minora and to the labia majora. 400 shocks were administered to each treatment region, totalling 2400 shocks per treatment session. Ultrasound gel was used as a lubricant and for ensuring a smooth transmission of shockwave energy to the targeted tissue.

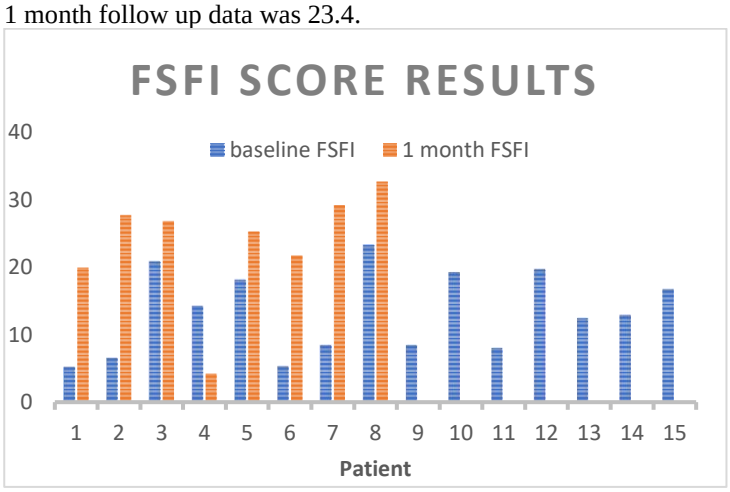
Energy density of the applied shockwaves was 0.09 mJoule per squared mm and the treatment efficiency was recorded by patient interviews utilizing the following questionnaires at baseline as well as 1 month and 3 months following the final treatment session:
* FSFI – Female Sexual Function Index questionnaire
* ICIQ-UI SF– International Consultation on Incontinence Questionnaire- Urinary Incontinence, Short Form

The ICIQ-UI score monitoring was secondary with purpose to record treatment impact for sexual dysfunction patients suffering also from urinary incontinence symptoms.

RESULTS

14 of the recruited 15 patients completed the entire protocol of 6 treatment sessions and are complying with the follow-up questionnaires. At the time of abstract submmission, 8 of the 14 have completed their 1 month follow-up review and

the remaining follow-up data is being recorded. None of the patients complained of pain or serious discomfort during the treatment sessions or afterwards. No side efects were experienced and no adverse effect recorded.
Average basline FSFI score was 13.3 for the entire cohort and the average FSFI score of the first 8 patients to record their 1 month follow up data was 23.4.



Of the 5 patients suffering from SUI symptoms, 3 have presently concluded their 1 month follow-up review and showing a decrease in their average ICIQ-UI SF score from 11.3 to 9.0.

INTERPRETATION OF RESULTS

The initial results of this pilot study demonstrate substantial increases in all chapters of the sexual dysfunction questionnaire, including: desire, arousal, lubrication, orgasm, satisfaction and pain reduction. The average increase in FSFI scores is over 10 points. We intend to present at EUGA the 3 month follow-up data of the entire cohort of patients treated which will be available by then.

CONCLUSIONS

There is a growing demand and need for new and safe minimally invasive solutions for women suffering from vaginal atrophy and sexual dysfunction symptoms. The safety profile and initial data from this study, although limited in their scope, support the need for additional, larger scale studies utilizing also control groups. Furthermore, initial data suggests the need for separate studies focused on patients suffering from urinary incontinence.

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16 - BASELINE CHARACTERISTICS AS RISK FACTORS FOR PERI- AND POST-OPERATIVE COMPLICATIONS FOLLOWING MIDURETHRAL SLING SURGERIES FOR THE TREATMENT OF STRESS URINARY INCONTINENCE (SUI): THE ROLE OF OBESITY AND THE ROLE OF ADVANCED AGE

Rotchild Matan, Shelef Goni, Sade Shani, Shoham-Vardi Ilana, Weintraub Adi Yehuda

Ben-Gurion University of the Negev, Soroka University Medical Center, Beer Sheba, Israel

BACKGROUND

Mid-urethral sling (MUS) surgeries for stress urinary incontinence (SUI) are generally safe and highly effective. However, some adverse events such as bleeding, infection, bladder perforation, vaginal mucosa perforation and neurological symptoms have been reported following these procedures. Few studies have used a validated classification score system such as the Clavien-Dindo classification system to grade the presence and severity of complications.

OBJECTIVE

To investigate whether obesity (BMI≥35) is an independent risk factor for peri- and post-operative complications following SUI repair surgeries over a period of 12 months using the standardized Clavien-Dindo classification system.

MATERIALS AND METHODS

We conducted a retrospective cohort study including 304 women who underwent an SUI repair surgery at a large tertiary, university, medical center between the years 2012-2018. Clinical data was collected from the computerized patient records. Patients were divided into two groups, obese (BMI>35) and non-obese. Univariate analysis was performed to compare the distribution of patient and operative characteristics divided by obesity group and to evaluate the complication rates and severity according to the Clavien-Dindo classification system. The Clavien-Dindo system has five grades including two sub-groups for grade 3 (3A, 3B) which are based on the therapy used to manage specific complications. Grade 1-2 are considered as minor complications and grade 3-5 are considered as major complications (1). Variables which were associated with post-operative complications (P<0.1) in the univariate logistic regression analysis were entered into a multivariate analysis model with the study variable obesity.

RESULTS

Demographic characteristics of the obese and non-obes patiens are presented in Table 1. Peri-operative charecteristcs are presented in Table 2. More than half of the patients did not experience any type of post-operative complications during the follow-up period. None of the women had experienced severe complications (grade 4 or 5). Obesity was not found to be associated with post-operative complications. The most frequent grade of complications were grade 2 (107 patients) and grade 1 (34 patients). All findings related to post-operative complications are presented at Table 3.

INTERPRETATION OF RESULTS

Obesity was not found to be significantly associated with peri- and post-operative complications. This finding is consistent with previous literature (2,3) and may be attributed to the significant higher rates of non-obese patients who had undergone additional procedures during the MUS surgery, specifically concomitant hysterectomy, which was performed in 23.7% of the non-obese group as compared with only 12.8% in the obese group.

CONCLUSIONS

Our findings suggest that SUI surgery is safe and most patients do not present with post-operative complications. No severe complications (grade 4 or 5) according to the the Clavien-Dindo classification were observed. Therefore, obese women with SUI could be reassured that obesity does not increase the risk for peri- and post-operative complications.

Table 1: Pre-operative and peri-operative characteristics of the study population by **age group**

	Young (age < 55)	Elderly (age ≥ 55)	P Value
Number of patients	125	182	
Age (Mean ± **SD)**	46.55 ± 4.921	67.15 ± 7.814	
Body mass index (BMI) (Mean ± SD)	28.96 ± 6.12	28.390 ± 4.83	0.389
Diabetes mellitus n (%)	4 (3.2%)	49 (26.92%)	<0.001
Hypertension n (%)	14 (11.2%)	79 (43.4%)	<0.001
Number of vaginal deliveries (Median, IQR)	3 (2-4)	3 (2-4)	0.715
Menopause n (%)	28 (22.40%)	167 (91.75%)	<0.001

Table 2: Grading of post-operative complications according to Clavien-Dindo classification system divided by **age group**

Complication group	**Age**		
	Young age (Age < 55)	**Elderly age (Age ≥ 55)**	**P value**
	n (%)	n (%)	
0 (None)	54 (43.20%)	92 (50.55%)	
Minor (1+2)	63 (50.40%)	78 (42.86%)	0.414
Major (3A+3B+4+5)	8 (6.40%)	12 (6.59%)	
Any complications	71 (56.80%)	90 (49.45%)	0.205

Table 3: Multivariate analyses of factors associated with any adverse events as defined by Clavien-Dindo classification system (grades 1-5) among patients undergone MUS surgery.

	Variable	OR (CI 95%)	Sig.
Model	Hysterectomy	1.677 (0.957-2.936)	0.071
	Pre-operative Hb value	0.797 (0.646-0.984)	0.035

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17 - THE CORRELATION OF MID-URETHRAL TAPE LOCATION WITH PATIENT REPORTED OUTCOMES AFTER MID-TERM FOLLOW-UP OF STRESS INCONTINENCE SURGERY

Seval Mehmet Murat, Baydemir Kaan, Çetinkaya Serife Esra, Dökmeci Fulya

Ankara University, Ankara University School of Medicine Department of Obstetrics and Gynecology, Ankara, Turkey

INTRODUCTION AND THE AIM OF THE STUDY

The location of the mid-urethral tape has been reported to be a crucial factor for the success of stress urinary incontinence surgery. However, studies correlating tape location with lower urinary tract symptoms after mid-urethral sling (MUS) surgery are limited in the literature (1,2). The aim of this study was to evaluate the correlation of the tape position relative to the urethral length with postoperative lower urinary tract symptoms (LUTS) and patient reported outcomes at mid-term follow-up in women who underwent MUS surgery.

MATERIAL AND METHODS

Women with a history of MUS surgery were included in the study (n=61, median follow-up 5 years, range 1-10 years). All women underwent a trans labial perineal ultrasound examination to evaluate the sling position (Voluson E8 system, GE Healthcare Ultrasound, Milwaukee, WI, USA). Women were examined in the supine position, with empty bladder, using a 4 – 8 MHz transducer placed on the labia minora. Images were taken in the median sagittal plane at rest. The mid-urethral tape was identified as a hyperechoic structure; the distance from the bladder neck to the midpoint of the tape was measured for all patients and the percentage of this measurement to the total urethral length was defined as “tape location” (Figure 1). LUTS were evaluated in all women with the Turkish validated questionnaires Urinary Distress Inventory-6 (UDI-6), Overactive Bladder Awareness Tool Version-8 (OAB-V8), and Sandvik Severity Index (SSI), which were self-administered and fulfilled. Patient Global Impression of Improvement (PGI-I) and the visual analog scale (VAS) were used in order to assess medium – long-term patient satisfaction after MUS surgery. The correlation coefficients and their significance were calculated using the Spearman test.

RESULTS

The demographic and clinical findings are summarized in table 1. The mean tape location was found to be at 58.7 ± 15.9 % of the urethral length (Figure 2); it was found to be located between 21-32% of the urethra in 4 women (6.6%), between 33-66% of the urethra in 37 women (60%) and 67-86% of the urethra in 20 women (32.8%). The correlation coefficients between the tape location and patient reported outcomes are shown in table 2. Tape location showed a significant weak positive correlation with VAS and a significant weak negative correlation with total, irritative and stress scores of the UDI, the OAB-V8 score and the SSI.

INTERPRETATION OF THE RESULTS

In this study, it was found that stress, OAB symptoms and incontinence severity decreased as the percentage of the tape location increased. These findings support the results of the studies, who reported that the optimal tape position was at the junction of the middle and distal thirds (at 50-80% of the urethral length at 6 months and 40–70 % of the urethral length at 48 months) (1) and higher failure rates with tapes positioned closer to the bladder neck (2, 3).

CONCLUSION

A higher percentile of the tape location seems to be correlated with better patient reported outcomes.

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Figure 1: Definition of the ultrasound measurements and “tape localization”.

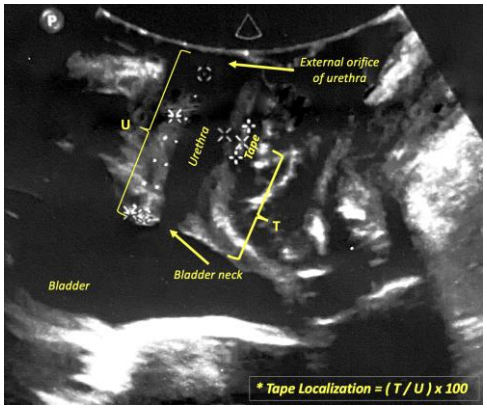

Table 1: Demographic and clinical findings of the patients

Age (years), mean ± SD	53.1 ± 9.3
Body mass index (kg/m2), mean ± SD	30.7 ± 4.3
Parity, median (min-max)	3 (0 – 9)
Nulliparous women, n (%)	2 (3.3)
Post-menopause, n (%)	41 (67)
Mid-urethral sling type, n (%) TOT TVT	 45 (74) 16 (26)
Follow-up (years), median (min-max)	5 (1 – 10)
PGI-I, median (min-max)	4 (0 - 6)
VAS, median (min-max)	6 (0 – 10)
UDI-6, median (min-max) Total score Irritative subscale Stress subscale Obstructive subscale	 11 (0 - 24) 4 (0 - 8) 4 (0 - 8) 2 (0 - 8)
OAB V8, median (min-max)	18 (0 - 39)
SSI, median (min-max)	4 (0 - 12)
Urethral length (mm), mean ± SD	29.0 ± 4.7
Distance from bladder neck to midpoint of the tape (mm), mean ± SD	17.4 ± 5.8
Tape location* (%), mean ± SD	58.7 ± 15.9

UDI: Urinary Distress Inventory, OAB V8: Overactive Bladder Awareness Tool Version-8, SSI: Sandvik Severity Index, PGI-I: Patient Global Impression of Improvement, VAS: Visual Analog Scale

* Tape location: The percentage of distance from bladder neck to midpoint of the tape to total urethral length (figure 1)

Table 2: The correlation coefficients between the tape location and patient reported outcomes

Patient reported outcomes	Tape location*	
	Correlation Coefficient	p
PGI-I	0.224	0.083
VAS	0.282	0.027
UDI-6 Total score	-0.316	0.018
UDI-6 Irritative subscale	-0.266	0.047
UDI-6 Stress subscale	-0.364	0.006
UDI-6 Obstructive subscale	0.064	0.636
OAB-V8	-0.342	0.011
SSI	-0.417	0.002

UDI: Urinary Distress Inventory, OAB V8: Overactive Bladder Awareness Tool Version-8, SSI: Sandvik Severity Index, PGI-I: Patient Global Impression of Improvement, VAS: Visual Analog Scale

* Tape location: The percentage of distance from bladder neck to midpoint of the tape to total urethral length (figure 1)

18 - PREVENTION OF URINARY TRACT INFECTIONS IN PATIENTS AFTER UROGYNECOLOGICAL PROCEDURES – HERBAL THERAPY (CANEPHRON N) VERSUS ANTIBIOTIC (FOSFOMYCIN TROMETAMOL): RANDOMIZED, EXPERIMENTAL TRIAL.

Wawrysiuk Sara, Rechberger Tomasz, Kubik-Komar Agnieszka, Kolodynska Aleksandra, Naber Kurt, Miotla Pawel

Department of Urology, Technical University of Munich, Munich, Germany, Faculty of Mathematics and Computer Science, University of Environmental and Life Science, Lublin, Poland, Second Gynecology Department, Medical University of Lublin, Lublin, Poland

INTRODUCTION AND AIM OF THE STUDY

Urinary tract infections are one of the most common complications of urogynecological surgeries. The potential risk of UTI increases because of catheterization of the bladder during and after the surgery, intraoperative cystoscopy, and urine retention after the procedure. Surgeries such as midurethral sling procedure are connected to a high incidence of UTI, the risk reaches up to 34%. [1] Increasing antibiotic resistance is the main reason for searching of new methods of post-operative UTI prevention. Commonly used antibiotic prophylaxis is being replaced with non-antibiotic preparations such as Canephron N, which is a mixture of century herbs, lovage roots, and rosemary leaves with a diuretic, spasmolytic, anti-inflammatory, antibacterial, and nephroprotective properties. [2] The aim of the study is to demonstrate the non-inferiority of Canephron N versus antibiotic (trometamol fosfomycin) in the overall results of post-operative urine culture analysis.

MATERIALS AND METHODS

The study protocol was approved by the local institutional ethical committee. Ninety-nine female patients age 18-70 years old before urogynecological surgeries such as implantation of midurethral sling, vaginal plastic surgery and Manchester operation were included in the study. The patients had a urine analysis taken in the morning before the surgery. Four patients were disqualified due to a urinary tract infection (UTI) before the procedure. The remaining patients were randomized into two groups, a control group (n=48) who received one dose of 3g of Fosfomycin trometamol the day after the procedure, and a study group (n=45) who received Canephron N 3 times a day for 14 days, starting the day after the procedure. Another urine analysis was taken 14 days after the surgery, also a urine culture was performed in case of abnormal urine analysis result or symptoms of urinary tract infection. All patients were assessed using the ACSS questionnaire on the day of the procedure and 14 days after.

RESULTS

Urinary tract infection (UTI) after 14 days from the procedure was observed in 5% of patients. Urine culture showed Escherichia coli in 3 cultures, Enterococcus faecalis, and Streptoccocus agalactia in the remaining cultures. There was no statistically significant difference between the use of trometamol Fosfomycin and Canpehron N in terms of UTI (Chi^2 N-1 =0.4472; p=ns). Factors such as menopausal status, BMI, sexual activity, and parity, had no correlation with postoperative UTI.

INTERPRETATION OF RESULTS

Urinary tract infections (UTIs) are one of the factors of treatment failure due to improper healing. Postoperative UTI is associated with the development of de novo urgency urinary incontinence and the risk of reoperation for mesh revision/removal. UTI in postoperative period is also a risk factor for recurrent stress urinary incontinence. Canephron N in non-inferior to fosfomycin trometamol in the prevention of postoperative UTI. Non-antibiotic methods of postoperative prophylaxis should be considered because of their safety in terms of antibiotic resistance.

The ACSS questionnaire is a standardized self-reporting questionnaire used for the diagnosis of acute uncomplicated cystis. It assesses symptoms, quality of life, and changes after the therapy. All patients received the questionnaire validated in their language. [3] Mean sum scores of the ACSS domains were comparable between the groups at the end of the follow-up period.

CONCLUSIONS

Perioperative prophylaxis with Canephron N should be considered as an alternative to a classic antibiotic use. The use of a phytotherapeutic drug may help to decrease antibiotic consumption which is strictly connected to growing antibiotic resistance. However, more studies on a larger group of participants and needed.

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19 - PHARMACOECONOMICS OF STRESS URINARY INCONTINENCE

Rocha-Lossada Alberto, Gonzalez-Garcia Silvia, Noya-Mourullo Andrea, Heredero-Zorzo Oscar, Hernandez-Sanchez Teresa, Valverde-Martinez Lauro-Sebastian, Marquez-Sanchez Magaly-Teresa, Padilla-Fernandez Barbara-Yolanda, Lorenzo-Gomez Maria-Fernanda

Department of Surgery, University of La Laguna, Tenerife, Spain, Department of Surgery, University of Salamanca, Salamanca, Spain, GRUMUR, Multidisciplinary Renal Research Group of the Institute for Biomedical Research of Salamanca (IBSAL), Salamanca, Spain, Urology, Avila Assistance Complex, Avila, Spain, Urology, University Hospital of Salamanca, Salamanca, Spain

INTRODUCTION AND AIM OF THE STUDY

Urinary incontinence is a health problem due to its high prevalence and impact on the quality of life of the patient (1). The surgical corrective treatment of stress urinary incontinence (SUI) with a transobturator tape (TOT) aims to save costs for patients and the National Health Service (NHS) (2).

OBJECTIVE:

The expenditure for patients and the NHS produced by the SUI is studied. The savings produced by surgical correction using TOT in the medium and long term are analyzed.

MATERIALS AND METHODS

Retrospective observational multicenter study. Expenditure on absorbents pre- and post-TOT were analyzed in a sample of 1000 patients with SUI. The absorbent and TOT costs (material, hospitalization, and process) were measured. Changes in the financing regime, success or failure of the intervention and long-term results are considered. All patients received the same type of suburethral band. Sources: Supermarket; Pharmacy and NHS.

RESULTS

Patients <65 years (GY): n = 358; 333 success (93%), 25 failure (7%). Patients> 65 years (GO): n = 642; 570 success (88.79%), 72 failure (11.21%). Follow-up time after TOT: mean 68.65 months (SD 41.91), range 0.50-150.00. Absorbing cost for <65 years: € 0.864 / day. Absorbing cost for NHS> 65 years: € 1,227 / day. TOT cost (tape + hospitalization + process): 360 + 404 + 2061 = € 2825. Balance 1-year post-TOT: <65 years savings € 105,014.88; > 65 years the NHS savings € 255,277.35. Balance at 3 years post-TOT: <65 years savings € 180,701.2; 135 go to> 65 years, 15 fail, NHS savings € 798,077.61. Balance at 6 years post-TOT: <65 years savings € 264,902.4; 45 go to> 65 years, 13 fail, the NHS savings € 1,485,982. Balance at 9 years post-TOT: <65 years savings € 295,176.96; 30 go to> 65 years, 11 fail, the NHS savings € 2,023,408.89. Balance at 13 years post-TOT: <65savings € 315,675.36; 23 go to> 65 years, 10 fail, the NHS savings € 2,625,773.86 (Figure 1 and 2).

INTERPRETATION OF RESULTS

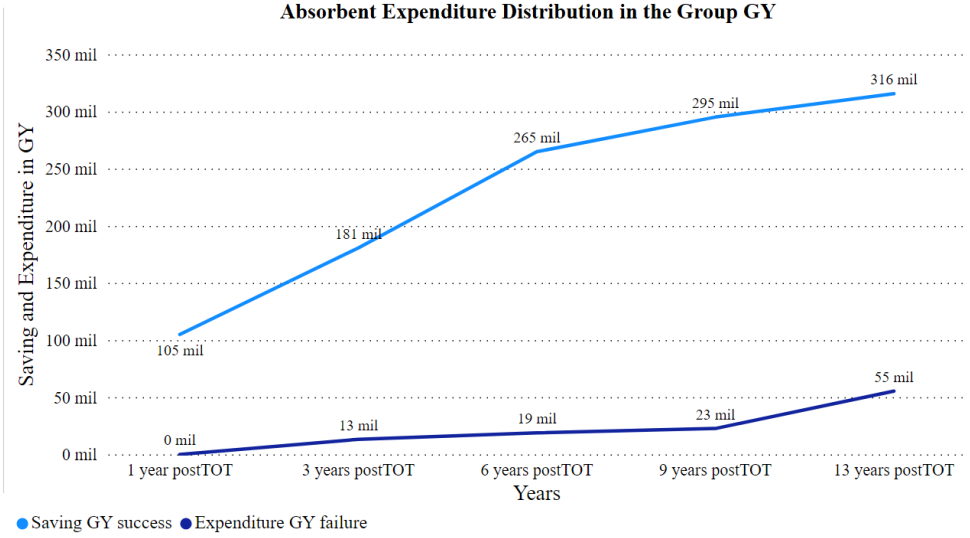
Age was a positive determining factor in the success of the intervention, the follow-up time was shorter in the older patients after the surgical intervention. In the group GY there is more spending on absorbents without subsidies (94.97%), in those over 65 (group GO), the subsidies are total (100%). Annual expenditure on absorbents prior to surgery in the group under 65 years of age was 112,898.9 euros per year, with an expenditure at 13 years of 1,467,684.4 euros. In the group over 65 years, it was 287,522.91 euros per year, expecting an expenditure of 3,737,797.83 euros at age 13. In all the years of follow-up, success was greater in those under 65 years of age (4.21%), however, savings were greater in the group over 65 years of age. The total saving in the GY group was 315,675.36 euros and in the GO group, the total saving was 2,625,773.7 euros.

CONCLUSIONS

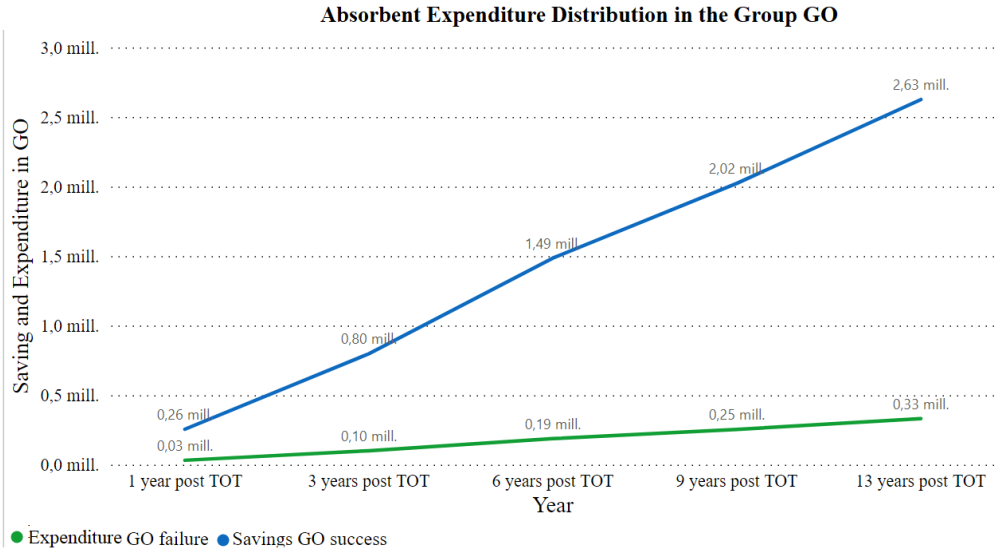
Surgical correction using transobturator suburethral tape provides savings in absorbents paid by the patients themselves and by the National Health Service from at least 3 months after surgery to 13 years of follow-up, being a cost-effective intervention.

Key words: Stress urinary incontinence, cost, financial balance.

Distribution of spending on absorbents in the group of young people (GY) success and failure



Distribution of spending on absorbents in the group of older people (GO) success and failure



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20 - 3-TESLA FUNCTIONAL MAGNETIC STIMULATION: A NEW METHOD FOR THE TREATMENT OF FEMALE URINARY INCONTINENCE?

Castronovo Fabiana, Caccia Giorgio, Favero Camilla, Papadia Andrea, Serati Maurizio, Braga Andrea

"Filippo Del Ponte" Hospital,, University of Insubria/ Department of Obstetrics and Gynecology, Varese, Italy, Ente Ospedaliero Cantonale, Beata Vergine Hospital/ Università della Svizzera Italiana/Department of Obstetrics and Gynecology, Mendrisio, Switzerland, Ente Ospedaliero Cantonale, Beata Vergine Hospital/Department of Obstetrics and Gynecology, Mendrisio, Switzerland, Ente Ospedaliero Cantonale, Civico Hospital/ Università della Svizzera Italiana/Department of Obstetrics and Gynecology, Lugano, Switzerland

INTRODUCTION AND AIM OF THE STUDY

Urinary incontinence (UI) is a common health problem with a negative impact on female quality of life. The guidelines of the most important urological and urogynaecological society, recommend pelvic floor muscle training (PFMT), as the first-line treatment for different forms of UI. In the last years, new technologies and applications have been introduced in this field. Functional magnetic stimulation (FMS), is a technique approved by the USA Food and Drug Administration in 1998, however very few studies in literature have assessed the efficacy of this device on female UI treatment. The aim of this study is to evaluate the effectiveness of the new 3 Tesla electromagnetic chair (FMS Tesla Care Prestige, Iskra Medical®), in patients with stress urinary incontinence (SUI) and overactive bladder (OAB) symptoms.

MATERIALS AND METHODS

This is a prospective study performed on patients with SUI and OAB symptoms who were referred to our urogynaecological unit between January 2020 and July 2021. Inclusion criteria for SUI were patients with demonstrable urinary leakage during the cough stress test, while for OAB were patients who had urgency, usually associated with frequency and nocturia, with or without urgency urinary incontinence for at least 3 months. Exclusion criteria were as follows: pregnancy, implanted pacemaker or cardioverter defibrillator, implants made of ferromagnetic metal at or near the site of stimulation, clinically significant voiding dysfunction, postvoid residual volume >100 ml, previous pelvic surgery for the treatment of pelvic organ prolapse (POP) or of UI, neurological diseases, Pelvic Organ Prolapse Quantification (POPQ) ≥ stage II, documented recurrent urinary tract infections, previous pharmacological treatment for OAB during the last 3 months. At the initial visit, patients underwent a medical history collection, a physical examination, post-void bladder ultrasound, urine laboratory analyses and urodynamic evaluation. All women also completed the following questionnaires before and after treatment: Urogenital Distress Inventory Short Form (UDI-6), Incontinence Impact Questionnaire Short Form (IIQ-7), International Consultation on Incontinence Questionnaire Short Form (ICIQ-SF) and OAB-questionnaire Short Form (OAB-q SF). The patients were treated with 3 Tesla electromagnetic chair (FMS Tesla Care, Iskra Medical®) which induced an electrical current in the nerve pathways and led to contractions of the pelvic floor muscles. The FMS treatment was administered for 20 min per session, twice a week for a total of 8 weeks. Before and during treatment, physiotherapists with specialized training in pelvic floor dysfunctions followed the women. The primary outcome was subjective outcomes evaluation. All women completed the Patients Global Impression of Improvement (PGI-I) Scale, and a Patient-satisfaction scale (a single, self-answered, Likert-type scale of 0–10 that grades the patient's degree of satisfaction regarding continence: 0 represents ''not satisfied,'' and 10, ''satisfied''). Subjective success was indicated both by ''very much improved or much improved'' (PGI-I ≤ 2) and by a patient-satisfaction score ≥ 8, while subjective improvement was indicated both by ''minimally improved'' (PGI-I ≤ 2) and by a patient-satisfaction score ≥ 7.The secondary outcome was the change score of the UDI-6, IIQ-7, ICIQ-SF and OAB-q SF from baseline to final visit. Results were analyzed using SPSS Statistics programme. Descriptive statistics were used to describe basic patients' characteristics. Non-parametric paired samples test was used to compare results before and after FMS treatment. Statistical significance was set at $p<0.05$.

RESULTS

One-hundred patients underwent 3 Tesla electromagnetic chair procedure. Baseline patients characteristics were summarized in Table 1. After 16 sixteen treatments, 28 out of 60 patients (47%) with SUI symptoms and 20 out of 40 patients (50%) with OAB symptoms, declared themselves cured (Table 2). Considering cured and improved patients, the subjective cure rate were 68.3 % (41/60) and 70% (28/40) for patients with SUI and OAB symptoms respectively. Statistically significant differences were found between patients reported outcomes pre and post-treatment (Table 3). No adverse effect has been reported.

INTERPRETATION OF RESULTS

The present study, showed the subjective outcomes of 3 Tesla electromagnetic chair treatment, in women with SUI and OAB symptoms. We found that FMS might be an effective and safe procedure with great patients acceptance. In fact, the patients were seated comfortably on the chair and fully clothed. This characteristic represent an advantage especially for elderly population.

CONCLUSIONS

The results of this study showed that 3 Tesla electromagnetic chair (FMS Tesla Care, Iskra Medical®) may be an effective option for the treatment of SUI and OAB symptoms, with great patients acceptance and no side effects.

Table 1. Baseline patients characteristics

Patients characteristics	SUI n=60	OAB n=40
Age, yr, median, (IQR)	52 (52-63)	63 (63-72)
BMI, kg/m2, median, (IQR)	26 (26-29)	29 (29-30)
Menopausal, no.(%)	24 (48)	25 (83.3)
HRT, no. (%)	4 (8)	4 (13.3)
Previous vaginal deliveries, median, (IQR)	1 (1-3)	2 (1-3)
Macrosome, ≥ 4000 g, no. (%)	2 (4)	5 (16.7)
Operative delivery, vacuum/forceps, no.(%)	3 (6)	5 (16.7)
Cesarean delivery, no. (%)	4 (8)	2 (6.7)
Recurrent Urinary Tract Infection, no.(%)	4 (8)	2 (6.7)

Table 2. Cure and improvement rate

Patients symptoms	% Cure rate (n)	% Cure and Improvement rate (n)
SUI	47 (28/60)	68.3 (41/60)
OAB	50 (20/40)	70 (28/40)

Table 3. Changes in patients reported outcomes.

	SUI pre	SUI post	p value	OAB pre	OAB post	p value
ICI-Q SF	9 (9-14)	5 (5-8)	0.0001	11(10-13)	6 (6-9)	0.005
UDI-6 SF	46 (46-54)	41 (41-46)	0.0005	50 (50-54)	38 (38-42)	0.001
IIQ-7 SF	17 (17-24)	6 (5-17)	0.0003	17 (17-33)	11 (11-17)	0.02
OAB-q SF	-	-	-	48 (48-55)	38 (38-53)	0.002

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21 - VAGINAL LASER THERAPY FOR WOMEN WITH GENITOURINARY SYMPTOM OF THE MENOPAUSE AFTER TREATMENT FOR BREAST CANCER: A RANDOMIZED CONTROLLED TRIAL

Gold (Ulrich) Daniela, Nicolay Laura, Avian Alexander, Greimel Elfriede, Tamussino Karl, Trutnovsky Gerda

Medical University Graz, Department of Biostatistics and Informatics, Graz, Austria, Medical University Graz, Department of Gynecology, Graz, Austria, Medical University Graz, Department of Obstetrics and Gynecology, Graz, Austria

BACKGROUND

Genitourinary syndrome of menopause (GSM) affects women after breast cancer under antihormonal therapy in up to 61%. Hormone-free therapies like intravaginal laser therapy and hyaluronic acid suppositories have shown symptom relief in women with breast cancer, but have not been tested against each other. The aim of this study was to compare the efficacy of intravaginal GSM treatment in women with breast cancer in a randomized fashion.

METHODS

In this randomized controlled trial we randomly assigned 45 women (age 54, IQR: 49 – 58) with GSM and a history of breast cancer to receive intravaginal laser therapy (2 courses within 1 months) versus hyaluronic acid suppositories (3 times per week continuously for three months). The primary end-point was the improvement of the vaginal health index (VHI) score after 3 months. Secondary endpoints were subjective bother for all GSM symptoms, i.e. vaginal atrophy, dyspareunia, urinary incontinence on a visual analogue scale. Quality of life and sexual health were assessed with the EORTC QR45 and SHQ-C22 questionnaire.

RESULTS

45 women underwent randomization, 22 were randomized to intravaginal laser therapy, 23 to vaginal suppositories with 21 women being available for follow-up. At baseline, the VHI was 9 in the laser groups vs. 13 in the suppository group indicating vaginal atrophy in all study participants. The score improved significantly in both groups (p=0.001) but did not reveal any differences between intravaginal laser therapy versus hyaluronic acid suppository therapy (median: 10, IQR: 8 – 14 to 13, 11-17; p= 0.232).

At baseline, vaginal atrophy and dyspareunia were the most bothersome GSM symptoms affecting more than 80% of women. At three months follow-up, most GSM symptoms improved significantly without any significant difference between treatment type.

The bother of vaginal atrophy on a numeric rating scale improved from 7 to 3 points in the laser group (p<0.001) and from 4 to 2 in the suppository group (p=0.002) in line with a significantly improved VHI index in both groups.

The overall score in terms of pelvic floor symptoms improved significantly in both groups (p=0.008 and 0.029), however, similar to the remaining results, not between treatment groups (0.650). The incontinence domain showed a significant improvement in the laser group (0.017) but not in the suppository group. Conversely, the sexual health domain improved significantly in the suppository group (0.007) but did not reach significance in the laser group (0.054).

Significant improvement was also seen in both groups for quality of life and sexual health, without significant differences between laser and hyaluronic acid therapy.

Quality of life and sexual health can significantly improve in women with breast cancer suffering from genitourinary syndrome of menopause after treatment with intravaginal laser therapy and hyaluronic acid suppositories.

DISCUSSION

Both intravaginal laser therapy and hyaluronic acid suppositories are effective treatment options for women after breast cancer suffering from GSM. No difference was found between treatment regimens. (ClinicalTrials.gov number, NCT03816735).

22 - EFFECT OF THE LENGTH OF THE SECOND STAGE OF LABOUR ON PELVIC FLOOR DYSFUNCTION

O'Leary Bobby, Kelly Linda, Keane Declan

National Maternity Hospital, Urogynaecology, Dublin, Ireland

INTRODUCTION AND AIM OF THE STUDY

Pelvic floor dysfunction (PFD) refers to any combination of urinary and faecal incontinence, overactive bladder, pelvic organ prolapse, and sexual dysfunction1. The burden of PFD varies by country, though most studies agree that PFD affects approximately 25-30% of women1. Parity—in particular, vaginal delivery—and age have been strongly associated with PFD2. Many studies have examined obstetric risk factors for PFD such as mode of delivery or fetal birthweight2, with much less reported on the length of the second stage of labour3.

Prolongation of the second stage of labour, while purported as a means of decreasing caesarean section rates, has been linked to obstetric anal sphincter injury and levator ani muscle avulsion. Similarly, compressive injury of the pudendal nerves at the level of the ischial spines during the second stage of labour is possible and could be exacerbated by prolonging this period. This study aimed to establish the prevalence of pelvic floor dysfunction in pregnant women and to investigate if a longer second stage of labour worsened pelvic floor dysfunction.

MATERIALS AND METHODS

This was the second part of a prospective cohort study. Women were recruited from consecutive antenatal clinics and were included if they had a live, singleton fetus, and were 18 years or older. Those women with previous bladder or bowel surgery were excluded.

Women completed the Australian Pelvic Floor Questionnaire during the antenatal period and again online at 3-months after delivery. There were no exclusion criteria based on parity. Obstetric and demographic details were obtained from the hospital computer database. Maternal age and gestational age were compared between groups using one-way ANOVA. Pelvic floor scores between multiple groups were compared using the Kruskall-Wallis H Test. Multiple regression models were created with total pelvic floor score and individual domains as the dependent variables and were adjusted for the length of the second stage of labour, birthweight, mode of delivery, perineal trauma, maternal age, and body mass index.

RESULTS

In total, 657 women were recruited and 647 (98.5%) completed the questionnaire. Of these women, 481 (74.3%) completed the questionnaire at three months. Of the women who completed the follow-up questionnaire, 246 (51.1%) were primiparous, 185 (38.5%) were multiparous with more than one previous vaginal delivery, and 50 (10.4%) were multiparous having had only previous caesarean deliveries.

The median (range) total pelvic floor score was 5.7 (0 - 19.8). Primiparous women had a median (range) total pelvic floor score of 5.5 (0 - 18.6). In those women with previous vaginal deliveries, the median total score was 5.9 (0 - 19.8), while the median score in those with only previous caesarean deliveries was 5.2 (0 - 13.4). There was no significant difference in total pelvic floor scores between primiparous women, those with more than one vaginal delivery, and those with previous caesarean deliveries only ($p = .725$). Of women who responded, 1% (5/481) were asymptomatic.

In total, 481 women responded to the online questionnaire, of which 246 (51.1%) were primiparous. Of these, 161 (33.5%) had a vaginal delivery. The median (range) length of the second stage of labour was 56 (2 - 199), and was significantly shorter than that seen in multiparous women or those with a previous caesarean section ($p < .001$).

There was no difference in total pelvic floor dysfunction scores when primiparous women were analysed based on the length of their second stage of labour ($p = .455$). When each of the four domains were analysed separately, there was a significant increase in both the postnatal bladder-domain score ($p = .003$) and the change in bladder-domain scores ($p < .001$) in women pushing for more than 120 minutes. There were no significant differences in the bowel, prolapse, or sexual function domains.

On regression modelling, there were no significant relationships between any of the independent variables and the change in total pelvic floor scores. When the change in bladder score was analysed separately there was a significant relationship between maternal age ($p = .041$), maternal body mass index ($p = .042$) and length of the second stage of labour ($p = .006$) and the change in bladder domain scores. There were no significant relationships identified for the bowel, prolapse, or sexual function domains on regression modelling.

INTERPRETATION OF RESULTS

This study has shown that the length of the second stage of labour does not affect total pelvic floor scores in primiparous women but appears to impact bladder symptoms. Maternal body mass index was negatively associated with self-reported bladder dysfunction, while maternal age was protective. This effect was not seen in multiparous women or those with previous caesarean deliveries only. Overall, there was no difference in pelvic floor scores by parity or by mode of delivery. The clinical impact of this study is that primiparous women with a longer second stage of labour should be made aware that they are more likely to have bladder symptomatology at three months postnatal compared to other primiparous women. Longer-term sequelae are unknown, and these bladder symptoms may normalise over time. There is no difference in bladder symptoms in the antenatal period between nulliparous women and multiparous women, suggesting that either pregnancy itself exerts a similar effect on all women, or that these symptoms do not persist. This study adds to the existing evidence that extension of the second stage of labour to reduce the risk of caesarean section is not without morbidity, and this should be considered in any unit attempting to reduce its caesarean section rate.

CONCLUSIONS

A prolonged second stage of labour is associated with more self-reported bladder dysfunction at three months postnatal in primiparous women. Maternal BMI appears to be negatively associated with pelvic floor symptoms, while maternal age confers some degree of protection. Prolapse symptoms are almost absent regardless of parity. Primiparous women with a longer second stage of labour should be informed about the risk of short-term bladder dysfunction, though the prevalence of long-term sequelae is unknown.

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23 - WEIGHT LOSS WITH BARIATRIC SURGERY OR BEHAVIOUR MODIFICATION AND THE IMPACT ON FEMALE OBESITY-RELATED URINE INCONTINENCE: A COMPREHENSIVE SYSTEMATIC REVIEW AND META-ANALYSIS

Da Silva Ana Sofia, Sheridan William, Leca Bianca, Ostarijas Eduard, Cardozo Linda, Dimitriadis Georgios

Department of Endocrinology ASO/EASO COM, King's College Hospital NHS Foundation Trust, London, United Kingdom, Department of Urogynaecology, King's College Hospital NHS Foundation Trust, London, United Kingdom, Department of Urogynaecology, King's College Hospital, London, United Kingdom, Faculty of Life Sciences and Medicine, School of Life Course Sciences, King's College London, London, United Kingdom, Institute for Translational Medicine, University of Pecs Medical School, Pecs, Hungary, University Hospitals Coventry and Warwickshire NHS Trust, University Hospitals Coventry and Warwickshire NHS Trust, Coventry, United Kingdom

INTRODUCTION AND AIM OF THE STUDY

Obesity is a growing pandemic, with the World Health Organization (WHO) reporting that obesity has nearly tripled worldwide since 1975 (1). Obese women are at risk of pelvic floor dysfunction with a 3-fold increased incidence of urgency urinary incontinence (UUI) and double the risk of stress urinary incontinence (SUI) (2,3). The National Institute for Health and Care Excellence (NICE) and European Association of Urology (EAU) recommend that women with a body mass index ≥30 kg/m2 should consider weight loss prior to consideration for incontinence surgery. This systematic review and meta-analysis aims to compare and understand better the effects of weight loss with bariatric surgery or behaviour modification in women with obesity-related urinary incontinence (UI)

MATERIALS AND METHODS

The protocol was developed according to the Preferred Reporting Items for Systematic Review and Meta-Analysis Protocols (PRISMA-P), Medical Literature Analysis and Retrieval System online (MEDLINE), EMBASE, Cochrane, ClinicalTrials.gov, and SCOPUS were systematically and critically appraised for all peer reviewed manuscripts that suitably fulfilled the inclusion criteria established a priori and presented original, empirical data relevant to weight loss intervention in the management of urinary incontinence. Our MeSH (Medical Subject Heading) search terms were; “weight loss surgery” OR “bariatric surgery” OR “metabolic surgery” OR “weight loss” OR “obesity surgery” OR “obesity treatment” OR “gastric sleeve” OR “sleeve gastrectomy” OR “gastric bypass” OR “gastric band” OR “duodenal switch” OR “biliopancreatic diversion” OR “LSG” OR “LVSG” OR “RYGB” OR “LAGB” OR “diet induced weight loss” OR “lifestyle intervention” OR “obesity medication” OR “weight loss medicine” OR “weight loss drug” OR “weight loss device” AND “urinary incontinence” OR “lower urinary tract symptoms” OR “LUTS” OR “stress urinary incontinence” OR “overactive bladder” OR “detrusor overactivity” OR “Urgency urinary incontinence” OR “Prolapse” OR ”POP”.

Covidence Software was used to manage the study selection process. Data were extracted independently by three reviewers following Cochrane Public Health Group Data Extraction and Assessment Template. The primary outcomes were the prevalence of total UI, SUI and UUI before and after weight loss intervention. Quality assessment was conducted using the Newcastle-Ottawa scale. Meta-analytical calculations were performed using MedCalc.

RESULTS

Of the 702 references imported for screening, 157 duplicates were removed, leaving 545 articles to be screened against title and abstract, 69 papers underwent full-text review. Of the resulting 33 studies included, 12 originated from different counties, amassing 5616 participants, with a sample size ranging from 10 to 1565 and age range of 18-78 years. Figure 1 demonstrates the PRISMA flow diagram of systemic reviews.

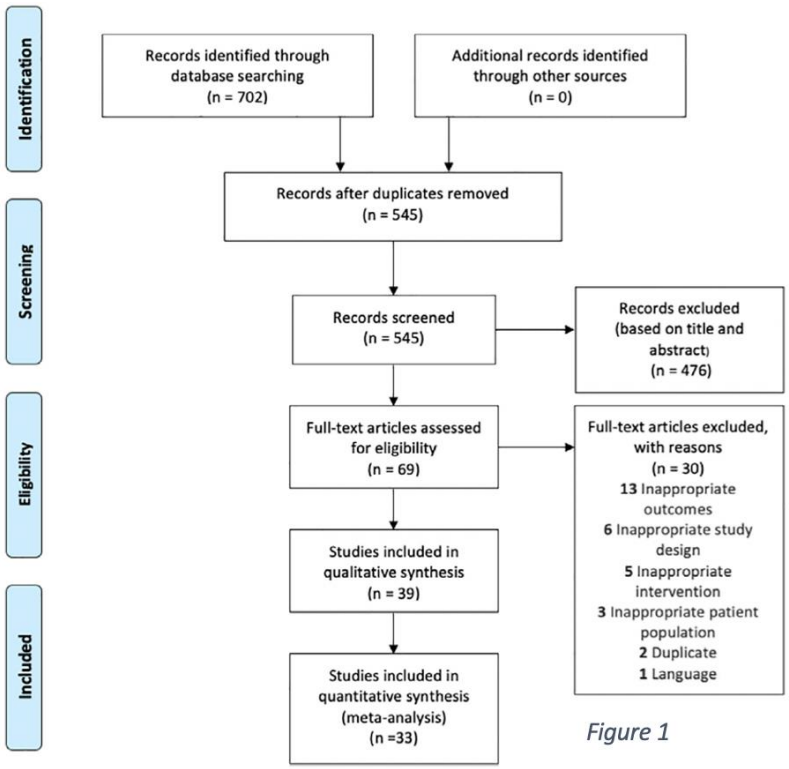

Figure 1

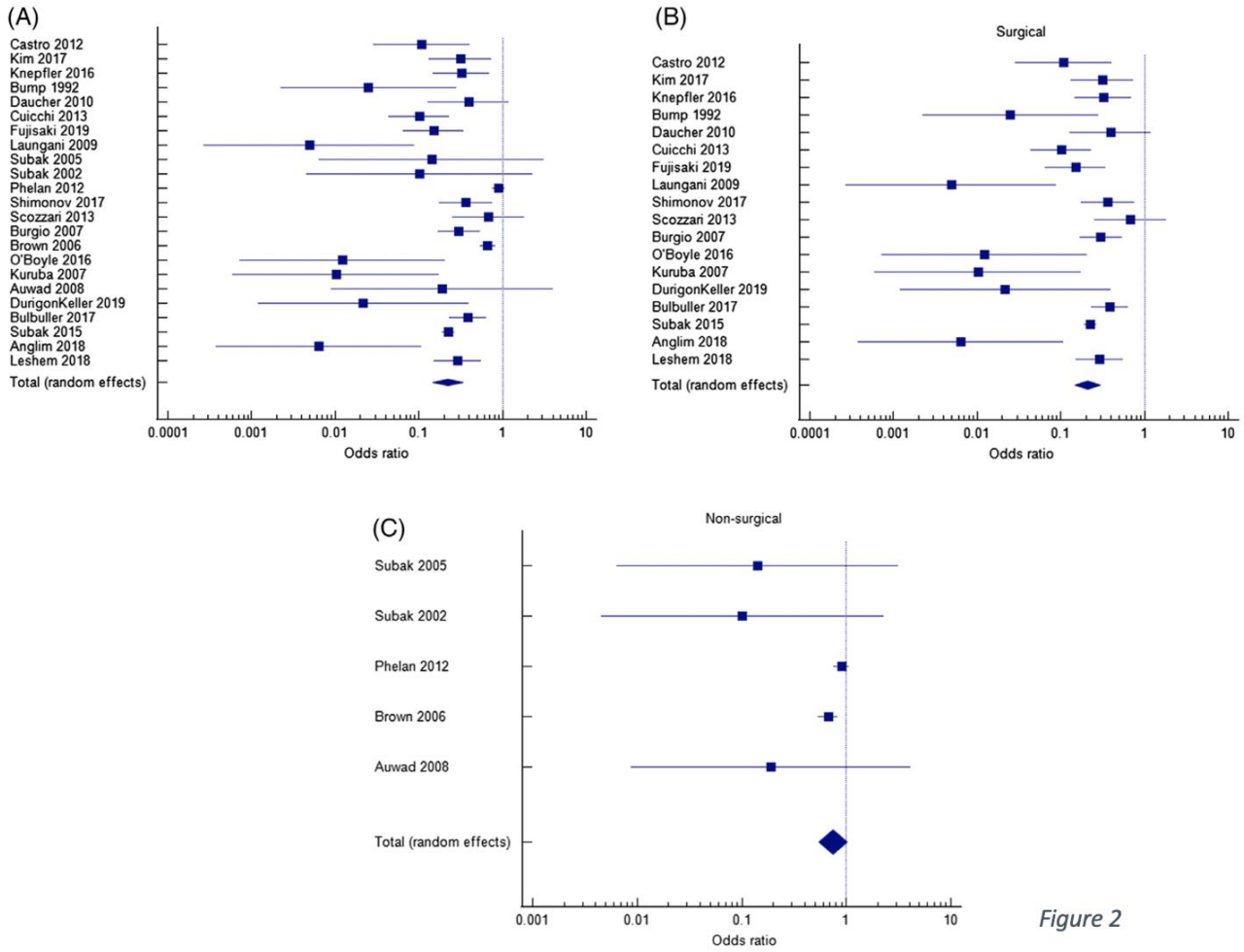

Figure 2

Weight loss interventions were associated in a decreased prevalence in UI (OR 0.222, 95% CI [0.147, 0.336]), SUI (OR 0.354, 95% CI [0.256, 0.489]), UUI (OR 0.437, 95% CI [0.295, 0.649}) and improved quality of life (PFSI-20, SMD -0.774 (95% CI [-1.236, -0.312]). Figure 2 demonstrates Forest plot of OR values of UI prevalence from all interventions (A), surgical intervention studies (B) and behavioural (non-surgical) intervention studies (C)

INTERPRETATION OF RESULTS

The results of this meta-analysis demonstrate that the prevalence of UI before and after weight loss was significantly reduced. Subgroup analysis of interventions identified that weight loss achieved with surgical intervention was associated with greater reduction in the odds of patient experiencing UI compared with weight loss achieved with behavioural intervention. This may be linked to the greater reduction in BMI (SMD -2.120, 95% CI [-2.543, -1.696] in the surgical intervention group.

CONCLUSIONS

This systemic review and meta-analysis provides evidence that weight loss interventions are effective in reducing the prevalence of obesity-related UI symptoms in women. Bariatric surgery in particular shows greater sustained weight loss and improvements in UI prevalence.

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24 - LAPAROSCOPIC MODIFIED DAVYDOV'S PROCEDURE IN WOMEN AFFECTED BY MAYER-ROKITANSKY-KÜSTER-HAUSER SYNDROME: A PROSPECTIVE CASE-CONTROL STUDY OF SEXUAL FUNCTION AND SEXUAL DISTRESS

Di Fatta Simona, Fedele Luigi, Candiani Massimo, Salvatore Stefano, Ruffolo Alessandro, Parma Marta, Oreglio Chiara

IRCCS, San Raffaele Hospital/Obstetrics and Gynecology, Milan, Italy

INTRODUCTION AND AIM OF THE STUDY

Laparoscopic modified Davydov's vaginoplasty is a safe and minimally invasive surgical procedure, very well tolerated by patients affected by Mayer-Rokitansky-Küster-Hauser syndrome (MRKHS). It is well established that laparoscopic peritoneal vaginoplasty in these patients results in excellent anatomical outcomes, in terms of neovaginal length and width, as well as neovaginal walls elasticity. The aim of this study is to investigate the functional outcomes, evaluating sexual function and sexual distress, in women affected by MRKHS who underwent laparoscopic modified Davydov's procedure.

MATERIALS AND METHODS

From February 2013 to March 2021, 63 patients with vaginal agenesis underwent laparoscopic modified Davydov's procedure in our Unit. During the post-surgical follow up, sexual activity was prospectively investigated. Two self-reported questionnaires were used to assess the key dimensions of female sexuality in sexually active women: the Female Sexual Function Index (FSFI) and the Female Sexual Distress Scale (FSDS). The same questionnaires were given to age-matched sexually active healthy controls and results were compared. Data analysis was performed using SPSS 21.0 and continuous variables were reported as mean ± standard deviation (SD) or as median ± interquartile range, as appropriate. The statistical significance of difference in distribution was tested with Pearson $\chi 2$ test and the exact Fisher test for categorical variables. For continuous variables the Mann-Whitney U-test for intergroup differences was adopted. The statistical analysis was conducted at 95% confidence level.

RESULTS

Fifty-six women (88.9%) affected by MRKHS an submitted to laparoscopic modified Davydov's procedure have been regularly followed up at the dedicated clinic for female genital malformations at our Institute. At a median follow up of 22 months (range 21-25), median vaginal length and caliber were 8 cm and 2.5 cm respectively. Twenty-nine women (51.8%) referred to have engaged satisfactory sexual intercourses at a median of 9 months (range 6-12) after surgery. As control group 18 sexually active women (18/29; 62.1%), with a median age of 20 years, accepted to be included in the study and confirmed to had engaged sexual intercourses in the four weeks prior to the compilation of the questionnaires, to avoid biases. No statistically significant difference was found in frequency of sexual intercourses (P=0.801), in type of orgasms (vaginal, clitoral or both) experienced (P= 0.349), and in total FSFI score (P=0.097) between the two arms. Instead, a statistically relevant difference was found regarding the lubrication domain of the FSFI (P=0.017). Concerning sexual distress, the FSDS overall scores was significantly different between patients and controls (MRKHS = 18.77±14.24; control = 8.61±3.83; P=0.041). Notably, patients claim to suffer feeling of guilt (P<0.0001) and frustration (P=0.007) because of their sexual life, and they see themselves as inadequate (P=0.039) and inferior (P<0.0001) to other women because of their sexual problems.

INTERPRETATION OF RESULTS

The total FSFI score was found to be utterly comparable between patients undergoing Davydov's vaginoplasty and the control group. Only vaginal lubrication, proving achievement and maintenance of lubrication during sexual intercourses, resulted more difficult to be obtained by patients compared to controls. However, we found that the main difference between the two groups included in the study, was about personal distress: MRKHS patients experienced considerably higher levels of sexual-related personal distress compared to control group. This might have been expected, due to the fragility of these young patients suffering from a severe genital anomaly, which heavily influences the development of their female identity.

CONCLUSIONS

Our study shows that laparoscopic modified Davydov's procedure has an optimal success rate not just in terms of anatomical reconstruction but also for sexual function. At the best of our knowledge this is the first study comparing sexual function in MRKHS women after surgery and a control group. From this study on we started paying more attention on vaginal lubrication after surgery, and when needed we suggested the use of lubricants before and during the sexual intercourses. The presence of severe sexual distress underlines the crucial importance of psychosexual education from the moment of diagnosis and throughout the follow-up. It is of paramount importance to help patients develop sexual self-

confidence to enable them to reduce feelings of distress and inadequacy in the context of couple intimacy. This requests a team-work including a psychosexuologist for this group of women.

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25 - THE SAFETY OF SURGICAL MESH - WHAT IS YOUTUBE TEACHING OUR PATIENTS?

Pham Cecile, Parkin Cameron, Chung Amanda

North Shore Urology Research Group, Royal North Shore Hospital, St Leonards, Australia

INTRODUCTION AND AIM OF THE STUDY

Due to the complications associated with transvaginal mesh for pelvic organ prolapse repair, many patients are worried about consenting to urogynaecological procedures which also involve mesh, such as for stress urinary incontinence. This study assesses the quality and content available to patients on YouTube when searching for information about the safety of mesh in surgery.

MATERIALS AND METHODS

Two independent reviewers who are both medical practitioners, searched 'is surgical mesh safe' on YouTube in June 2021 and evaluated the first 50 videos listed, reflecting the content patients are most likely to view. No search restrictions were applied, including language. Information related to views, video producer, quality of content, understandability and actionability for viewers was assessed. The videos were assessed using the validated Patient Education Materials Assessment Tool (PEMAT) [1] and the DISCERN criteria [2]. PEMAT is a tool which assesses the understandability and actionability of audio-visual content. It consists of assessment of thirteen areas of understandability and four areas of actionability. For each area, assessors graded the content on whether or not it reflected the criteria - as either 'Agree', 'Disagree' or 'Not Applicable'. 'Agree' is chosen if the content assessed occurs in 80-100% of the material presented. The total score was then calculated ('Agree' = 1 point, 'Disagree' = 0 points) and a percentage score for understandability and actionability generated. The DISCERN criteria assesses the quality of consumer health information, focusing on the sourcing, bias and reliability of information provided. The content is assessed across 16 areas, rated overall from a score of 1 (serious or extensive shortcomings) to 5 (minimal bias). Before assessing content, both reviewers familiarised themselves with both the PEMAT and DISCERN tools. Any conflicts in the grading of material were discussed between reviewers and a decision made. Statistical analysis was performed using R software version 3.6.3 to undertake univariate analysis with PEMAT and DISCERN scores. A p value of <0.05 was deemed significant.

RESULTS

The first 50 videos listed by YouTube when searching 'is surgical mesh safe' were produced from January 2011 to April 2021. 60% of the videos were produced by a recognised medical institution. 22% of video content had advertising material referring viewers to medical or legal services. The median number of total views per video was 19157 (range 42 – 16732114) and the median number of views per month was 620 (range 1 – 539746). Viewers overall seemed engaged with the content presented, with a median of 97 likes compared to a median of 5 dislikes per video. Viewer engagement was encouraged across the content with 76% of videos allowing viewers to write comments and questions which video producers often responded to. Despite the median PEMAT understandability score of the content being 77% (range 23 – 100), there was limited actionability of content reflected by a PEMAT score of 23% (range 0 – 100). The DISCERN criteria reflects the quality and relevance of information provided to viewers. The overall quality of information provided was poor and failed to adequately address the safety of surgical mesh, reflected by a median relevance score of 1 (range 1 - 4), a median bias assessment of 2 (range 1 – 5) and median overall score of 2 (range 1 – 4). Only 6% of video content addressed the safety and efficacy of surgical mesh in stress urinary incontinence, with the majority of content focusing on complications related to mesh abdominal hernia repair or transvaginal mesh. On univariate analysis, there was no association with video content produced by a medical institution with a higher overall PEMAT or DISCERN score ($p = 0.859$). Nor was there an association with the numbered listing on YouTube ($p = 0.893$) or number of views ($p = 0.993$) with higher PEMAT or DICERN scores.

INTERPRETATION OF RESULTS

A large proportion of informative videos listed on YouTube are not produced by recognised medical institutions. Despite the median PEMAT understandability score being 77%, there was limited actionability of content reflected by a PEMAT score of 23%. The overall quality of information provided was poor and failed to adequately address the safety of surgical mesh. There was no association with the numbered listing on YouTube or number of views with higher PEMAT or DICERN scores.

CONCLUSIONS

YouTube is one of the most readily accessible mediums for health information. It has shown to be a poor source of information on the safety, utility and efficacy of surgical mesh. The quality of information was significantly biased. Concerningly, there was no association between the quality of content and the number of views. Medical practitioners need to be aware of this as patients may have preconceptions on the use of mesh.

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26 - INFORMED CONSENT IN PELVIC RECONSTRUCTIVE SURGERY- PATIENTS' PERSPECTIVE OF A TERTIARY SERVICE

Verma Vandna, Medina Lucena Hayser, Pandeva Ivilina, Pradhan Ashish

Cambridge University Hospitals NHS Foundation Trust, Department of Pelvic Reconstructive Surgery, Cambridge, United Kingdom

INTRODUCTION AND AIM OF THE STUDY

The informed consent process for patients undergoing any procedure is important not only for ethical and legal reasons, but also for its impact on the overall experience and quality of care. Patients' involvement allows cooperation, improves satisfaction and also helps to prevent errors. Medico-legal concerns surrounding any intervention have led to growing emphasis on the necessity to provide detailed information to patients. This has led to the introduction of longer and more complex forms and preoperative procedures. In the UK, the Department of Health (DoH) has published national guidelines for obtaining valid consent to treatment. This aims to ensure that specific information about procedures, their benefits and complications as well as alternative treatment is imparted to the patient (1). Equally, NICE (National Institute of Health and Care Excellence) have designed a patient decision aid (PDA) specific for prolapse surgery to help patients in the decision-making process (2)

Although informed consent is a well-established practice, it often fails to meet its purpose (3). Here, we aim to evaluate patients' understanding of informed consent prior to pelvic reconstructive surgery, their experience and overall satisfaction of the process in tertiary setting.

MATERIALS AND METHODS

This was a prospective survey registered with the patient experience department as a service evaluation project. It was conducted at a tertiary unit in the UK where a dedicated clinic for review and consent is run on a weekly basis. All women undergoing pelvic reconstructive surgery who agreed to participate in the survey were included between the period of April 2021 to August 2021. A standardised anonymous survey questionnaire was designed which included both closed and open-ended questions. Traditional Decisional Conflict Scale (DCS) was employed to evaluate patients' experience and decision-making process. Patient satisfaction was evaluated using both a 5-point Likert scale (very satisfied to very dissatisfied) and a 10-point visual analogue scale (VAS) to improve the reliability of patients' responses. The questionnaire was given to the patients on the first postoperative day.

RESULTS

A total of 28 patients participated in the survey. The mean age of the participants was 61.4 years (SD 11.4) and majority were of British nationality (92.8%). 96.4% of participants reported reading the consent form in full. 100% of patients responded that the doctors explained the consent form to them. 89.3% felt that the explanation was clear, whereas for 78.6% of the participants, explanation had sufficient details. The majority (92.8%) felt they had enough time to think about the consent form before signing it. Most of the patients (78.6%) considered both oral and written information as most helpful in understanding the procedure. 100% of participants knew the details and type of surgery they were undergoing; felt they had the opportunity to ask questions and obtain detailed explanation by the clinicians regarding the risks of the surgery. Over half of all patients (57.1%) appreciated the importance of being included in the decision-making with only a minority of 14.3% preferring that medical staff decide for them. Patients attached considerable importance to understanding what they were signing (78.6%), having detailed information about the procedure (71.4%) and having a chance to ask questions (64.3%). The most common factors affecting the overall patients' satisfaction and experience of the consent process were receiving detailed information about the procedure (78.6%) and having read the consent form (53.6%). The mean traditional DCS score was 7.89 (SD 7.86) with a median of 6, which indicates overall high patient satisfaction with the decision. 71.4% of the participants were very satisfied/satisfied with the informed consent process and 82.1% scored 8-10 on the VAS scale (Figure 1)

CONCLUSION

Our survey suggests that a thorough consent process is associated with high patient satisfaction. A dedicated clinic for review and consent allows the opportunity for patients to receive detailed information, have an open communication with their clinicians thus improving understanding, involvement and maintaining shared decision-making.

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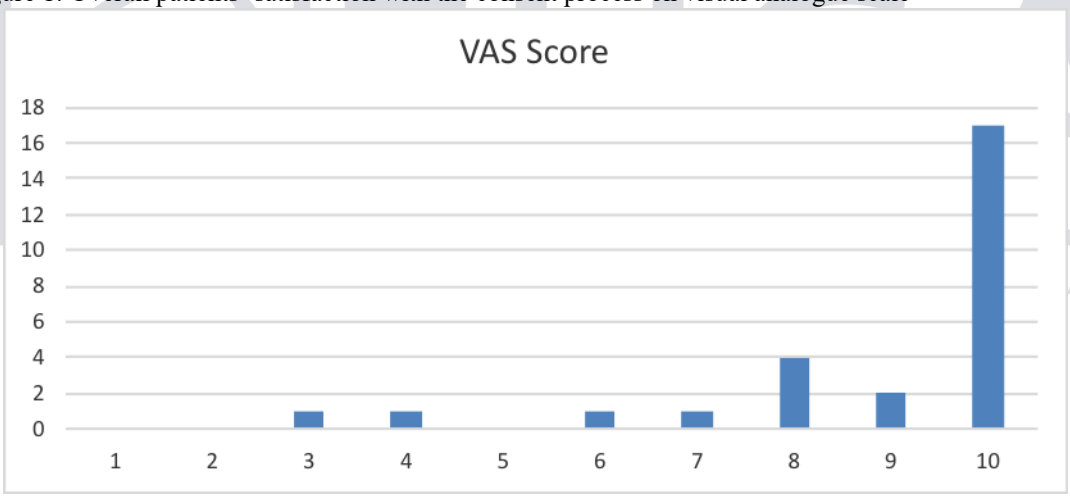
Table 1: Patients' view on the importance of specific issues during the consent process

Was it important to you to….	n = 28 (%)
Understand what you were signing?	22 (78.6%)
Have detailed information about the operation?	20 (71.4%)
Have a chance to ask questions about the operation?	18 (64.3%)
Have time alone with the consent form before signing it?	16 (57.1%)
Have someone check you understood the consent form before signing it?	12 (42.8%)
Have detailed information about surgery complications?	13 (46.4%)
Have your partner/relative check the consent form before signing it?	3 (10.7%)

Table 2: Factors affecting patients' experience and satisfaction of giving consent for the planned procedure

Variables	n = 28 (%)
Read the consent form	15 (53.6%)
Received detailed information about the procedure	22 (78.6%)
Agreed with everything on the form	14 (50%)
Someone checked you understood the information	10 (35.7%)
Was seen by a familiar doctor	11 (39.3%)

Figure 1: Overall patients' satisfaction with the consent process on visual analogue scale



27 - LONG-TERM EVALUATION OF LOWER URINARY TRACT SYMPTOMS AFTER BLADDER TRAUMA DURING CESAREAN SECTION. A CROSS-SECTIONAL CONTROLLED STUDY.

Tsiapakidou Sofia, Mikos Themistoklis, Chatziaggelou Anastasios, Minou Niki, Theodoulidis Iakovos, Zioga Eva, Pana Antigoni, Tsoukaki Maria, Tsolakids Dimitrios, Zepiridis Leonidas, Grimbizis Grigoris

Aristotle University of Thessaloniki, 1st Department of Obstetrics and Gynecology General Hospital Papageorgiou, Thessaloniki, Greece

INTRODUCTION AND AIM OF THE STUDY

There is a paucity of data regarding the long-term follow-up after lower urinary tract (LUT) complications during obstetric interventions. Cesarean section rates are increasing yearly, and maternal complications due to abnormal placentation, wound dehiscence, and adhesions follow a parallel ascending rate. The management of bladder trauma during cesarean section is a standardized procedure. The trauma is ideally recognized intraoperatively. The ureteric orifices are recognized and usually catheterized with utereric stents. Then, a two-layer closure of the bladder trauma is performed with continue 2.0 Vicryl. A retrograde filling of the bladder with 200-250 ml of methylene blue or indigo carmine solution secures the bladder wall integrity. The indwelling catheter remains for 8-12 days, and 2-3 weeks after catheter removal, a cystogram is recommended to exclude any post-operative fistula. Antibiotics are administered as per local protocol (cephalosporins with or without metronidazole). The short- and medium-term follow-up is usually satisfactory both objectively and subjectively.

The aim of this study is to investigate the rate of long-term LUT symptoms after bladder trauma during cesarean section (C/S).

MATERIALS AND METHODS

It is a cross-sectional study with the use of a control group. The study took place in a tertiary academic center, and ethical committee approval was as appropriately obtained. The study group consisted of all women who had bladder trauma during cesarean section in our center (Group A). The control group consisted of women who had an uncomplicated cesarean section in our center (Group B); these women were selected using the age and the number of previous C/S, in order to match with the study group and were delivered at the same period with the patients of Group A. Inclusion criteria were (1) the history of trauma during C/S, (2) Greek-speaking women. Exclusion criteria were (1) any other LUT injury, (2) another simultaneously iatrogenic injury.

The hospital electronic patient records were used for the demographics, the clinical, the operative, and the post-operative details. Specifically, information was sought regarding previous uterine scars, location, and type of placenta invasion, if any, presence of adhesions, the type of bladder repair, the length of hospitalization and bladder catheterization, and the need for peripartum hysterectomy. ICIQ and FLUTS were used for telephone interview of the patients.

All data were stored and analysed in Microsoft EXCEL. Paired t-test and $\chi 2$ were used to compare the results among two groups; $p<0.05$ was considered statistically significant.

Table 1. Demographic, Obstetric, and Neonatal data from the study population.

Clinical Parameter	Women with Bladder Trauma at C/S (n=36)	Controls (Women with uncomplicated C/S) (n=36)	P value
Age (years)	34.8±4.7	34.1±4.8	n.s
Weight (Kgr)	78.3±13.0	78.6±13.0	n.s
Height (cm)	165.7±4.4	159.6±7.5	**0.01** †
BMI (m/Kgr^2)	29.6±3.6	30.0±4.8	n.s
Parity (children)	2.8±0.9	2.8±0.9	n.s
Previous C/S	1.7±1.0	1.6±1.0	n.s
Delivery week	36.2±2,9	37.9±2.0	**0.005** †
Fetal birth weight (grams)	2718.7±549.2	3081.0±705.3	**0.032** †
Emergency C/S (%)	10/36 (27,8%)	10/36 (27.8%)	n.s
Adhesions (%)	15/36 (41,7%)	4/36 (2,8%)	**0.003268** †
Peripartum Hysterectomy (%)	13/36 (13,1%)	0/36 (0,0%)	**0.000353** †
Multiple gestation (%)	5/36 (13,9%)	5/36 (13,9%)	n.s

† = Statistically significant, n.s = Non-significant

RESULTS

Each group had 36 patients (72 patients in total). All clinical pre-operative and peri-operative details are shown in Table 1. According to the study design, there was a significant difference between the two groups in the length of catheterization, hospitalization, and the administration of the antibiotics. When comparing the ICIQ and FLUTS results, there were no significant differences between the two groups regarding their total score and subdivisions. Only the FLUTS – frequency question appeared to be significantly increased in the study group (p=0.02).

Table 2. ICIQ and FLUTS scores from the study population.

Clinical Parameter	Women with Bladder Trauma at C/S (n=36)	Controls (Women with uncomplicated C/S) (n=36)	P value
ICIQ Total (Mean)	0.7±2.5	1.0±2.6	n.s
FLUTS Total (Mean)	3.9±5.4	2.8±3.3	n.s
FLUTS Filling score	2.2±2.7	1.6±1.5	n.s
FLUTS Voiding score	1.1±1.9	0.4±1.5	n.s
FLUTS Incontinence score	0.7±2.3	0.7±1.6	n.s
FLUTS - Nocturia	0.7±0.7	0.7±0.6	n.s
FLUTS - Frequency	1.0±0.3	0.3±0.3	**0.02** †
FLUTS - Urgency	0.5±0.8	0.4±0.4	n.s

† = Statistically significant, n.s = Non-significant

INTERPRETATION OF RESULTS

Although there is a trend for higher FLUTS scores in women after bladder trauma during C/S, only the frequency domain appeared to be significantly different compared to the control group. These results implied that: (1) the current management of bladder trauma is adequate in clinical terms and efficient regarding long-term LUT sequelae, (2) the trend showing impaired bladder function in the study group needs to be investigated with more extensive series.

CONCLUSIONS

Long-term LUT symptoms after bladder trauma during C/S do not appear to be increased. However, the FLUTS frequency question appears to be higher after bladder trauma compared to healthy controls. Further studies may confirm the above findings.

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28 - COMPARISON OF PVDF VERSUS PP MATERIALS IN THE SURGICAL TREATMENT OF PELVIC FLOOR DISEASES IN TERMS OF POST-OPERATIVE COMPLICATIONS. A SYSTEMATIC REVIEW.

Mikos Themistoklis, Karalis Tilemachos, Tsiapakidou Sofia, Grimbizis Grigoris

Aristotle University of Thessaloniki, 1st Department of Obstetrics and Gynecology General Hospital Papageorgiou, Thessaloniki, Greece

INTRODUCTION AND AIM OF THE STUDY

For the last three decades, stress urinary incontinence in women has been successfully treated with synthetic sub-urethral slings. Polypropylene (PP) tape have dominated in this field as they have been tested and found to be characterized by good biological behavior. However, there are cases of women who have complications attributed to the nature of the material and how they are integrated into the human body. As a recent technological development, the use of polyvinylidene fluoride (PVDF) sub-urethral tape has been proposed to achieve maximum biocompatibility and optimal application and stabilization in tissues. PVDF tapes have been described as reducing inflammation and hematoma and having excellent elasticity. PVDF fibers are characterized by a reduced chance of foreign body reaction, therefore granuloma formation, shrinkage, or pain is reduced. PVDF tapes are considered ideal for patients who are allergic to polypropylene. Finally, the specific material may have visible technology (visible), allowing the postoperative examination of the implant with MRI.

The aim of this study is to systematically review and compare the surgical results after the use of PVDF tape and polypropylene (PP) incontinence tapes in pelvic organ prolapse (POP) and urinary incontinence surgery (UI) in terms of mesh complications.

MATERIALS AND METHODS

Articles published in PubMed, Medline, Cochrane and Scopus databases from inception till July 2021 with a reference to PVDF or PP and POP, or UI, or SUI, or OAB in the title or abstract were included. Inclusion criteria were (1) women subjects who underwent surgery with PVDF or PP for POP or UI, and (2) English language. All studies of any design except Case reports, Case Series, Letters, Editorials, and Reviews were included. The primary outcome was to compare the two different tapes regarding complications as erosion, pain, bleeding, etc. As secondary outcome was to determine the recurrence after surgery comparing the two materials in women with POP or UI. All data were collected and analysed with Microsoft EXCEL.

RESULTS

Of the 33 studies retrieved, 5 met the criteria for systematic review. From the 5 in total included studies, 3 studies were in UI and 2 in POP. All studies were conducted in European hospitals with a duration of 1.5 to 3 years of study. Regarding the study design, one was RCT, two Cohort studies, one Case- Control study, and one Cross-sectional study. 2 only were prospective studies and the rest retrospective. In the UI group, all subjects were pre-operatively urodynamically tested and in POP group the prolapse was evaluated using the POP-Q classification. Comparative results regarding the surgical treatment of SUI are shown in Table 1. There is no inferiority of the PVDF group in terms of complications such erosions or pain. Similar results are elicited for the surgical treatment of POP using PVDF. Mesh removal rates were similar in both groups.

Table 3. Study parameters according to the material used in Incontinence surgery.

	PVDF	PP
Enrolled subjects	355	444
Subjects underwent TOT surgery	183	264
Age	59.8	59.93
BMI	27.8	28.3
Post Tx Complications: Erosion	2/167 (1.1%)	2/232 (0.86%)
Post Tx Complications: Pain	2/167 (1.1%)	8/232 (3.44%)

INTERPRETATION OF RESULTS

PVDF appears to be a material that does not produce increased complication rates in the surgery of SUI or POP. The erosion rates, the post-operative pain, and the need for further intervention for mesh removal appear to be equal or improved compared to similar operations performed with PP slings or meshes.

Apparently, the other important issue is to prove non inferiority of the PVDF material in terms of continence rates and need to repeat the procedures because of primary failure.

CONCLUSIONS

PVDF tape has the advantage of theoretically reducing the risk of erosion of the mesh, a complication found in 1-2% of the PP tapes in use today. PVDF suburethral tapes and meshes have been found to have a safety profile comparable to PP tapes. Further studies should be conducted to provide more robust data on the association of specific tape as a management option in POP and UI patients.

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29 - DOES LOCALLY APPLIED ESTROGEN IMPROVE SEXUAL FUNCTION IN POSTMENOPAUSAL WOMEN WITH PELVIC ORGAN PROLAPSE?: A RANDOMIZED CONTROLLED TRIAL

Bodner-Adler Barbara, Lange Soeren, Umek Wolfgang, Marschalek Marie, Husslein Heinrich, Hanzal Engelbert, Carlin Greta

Medical University of Vienna, Department of General Gynecology and Gynecologic Oncology, Vienna, Austria

INTRODUCTION AND AIM OF THE STUDY

Pelvic organ prolapse (POP) can affect quality of life and in particular sexuality. It is well known that women with pelvic floor dysfunction are at increased risk to develop female sexual dysfunction with a prevalence up to 64% of women attending urogynecology clinics (1-3).
Aim of this study was to evaluate if locally applied vaginal estrogen improves sexual function compared to placebo treatment in postmenopausal women with POP.

MATERIALS AND METHODS

Prospective randomized, double-blind, placebo-controlled, multicenter study in postmenopausal women with symptomatic pelvic organ prolapse and planned surgical prolapse repair. Women were randomly assigned to local estrogen or placebo cream 6 weeks preoperatively. Main variable of interest was differences in sexual function after 6 weeks of treatment between the two groups, assessed with the comprehensive German pelvic floor questionnaire. For sample size calculation a two-sided t-test with 60 patients per group (n= 120 in all) resulted in more than 80% power (significance level 0.05).

RESULTS

Out of 120 randomized women 66 (55%) women were sexually active and remained for final analysis. Mean baseline score regarding sexual function was similar between the intervention and placebo group (1.29±1.54 vs 1.69±1.97; mean difference: -0.396; 95% CI: -1.09 to 0.298, P=0.26). After 6 weeks of local estrogen treatment, sexual function score did not differ between the estrogen and the placebo group (1.06± 1.35 vs. 1.54±1.82; mean difference: -0.477; 95%CI: -1.106 to 0.151, P=0.14). Multivariate analysis showed that advanced age as well as parity remained independent risk factors for worse sexual function score.

INTERPRETATION OF RESULTS

For a long time sexual function in women with POP received little attention. Social taboos prevented open discussion on this topic. However, a majority of older women report that sexuality is important to their well-being and overall quality of life. Therefore preservation of sexual function has now become an essential component of treatment. In conclusion, this RCT was not able to detect any benefits of LET with regard to sexual function in postmenopausal women with symptomatic POP.

This study was funded by Montavit Ges.m.b.H., Salzbergstraße 96, A-6067 Absam/Tirol, Austria
ClinicalTrials.gov Identifier: Preoperative Oestrogen in Postmenopausal Women with Pelvic Organ Prolapse, NCT03779633, EudraCT Nr. 2016-000410-30

30 - NATIVE-TISSUE PROLAPSE REPAIR: EFFICACY AND ADVERSE EFFECTS OF UTEROSACRAL LIGAMENTS SUSPENSION AT 10-YEAR FOLLOW UP

Volontè Silvia, Cola Alice, Barba Marta, Marino Giuseppe, Frigerio Matteo, Milani Rodolfo, Manodoro Stefano, Spelzini Federico

ASST Santi Paolo e Carlo, Ospedale San Paolo, Milan, ASST Santi Paolo e Carlo, Ospedale San Paolo, Milan, Milan, Italy, AUSL Romagna, Infermi Hospital, Rimini, Italy, AUSL Romagna, Infermi Hospital, Rimini, Italy, Rimini, Italy, Università of Milan Bicocca, San Gerardo Hospital, Monza, Italy, University of Milan Bicocca, ASST Monza - San Gerardo Hospital, Monza, Italy, University of Milan Bicocca, San Gerardo Hospital, Monza, Italy

INTRODUCTION AND AIM OF THE STUDY

Pelvic organ prolapse (POP) is the descent of the uterus, bladder, rectum and/or bowel through the vagina. Currently, in surgery there is a renewed interest in native-tissue techniques, among which, high uterosacral ligaments (USLs) suspension is considered a particularly valid and effective procedure for apical repair [1-3]. The aim of this study was to evaluate 10-years effectiveness and functional results of high USLs suspension as a primary prolapse repair technique. Moreover, we aimed to evaluate long-term impact of prognostic factors on outcomes.

MATERIALS AND METHODS

Between October 2008 and December 2012 patients who underwent native-tissue repair through vaginal hysterectomy followed by high USLs suspension for pelvic organ prolapse were retrospectively analyzed. Patients underwent additional surgical procedures such as anterior repair and posterior repair when needed. Patients were followed up yearly. Postoperative presence of bulging symptoms according to the specific item of the Italian version of P-QOL questionnaire was considered as a subjective recurrence. A postoperative descent ≥ stage II according to the POP-Q system was considered as objective recurrence. Patient Global Impression of Improvement (PGI-I) score was used to evaluate the subjective satisfaction after surgery. Differences were tested with Student T test for continuous parametric variables, with Wilcoxon test for continuous non-parametric variables, and with Chi square test for non-continuous variables. Statistical analysis was performed with JMP 7.0 (SAS, Cary, US). A $p<0.05$ was considered significant.

RESULTS

353 women who underwent vaginal hysterectomy and high USLs suspension were evaluated. Ureteral kinking was the most frequent complication (2.3%) and was managed intraoperatively by removal of offending suture(s) or ureteral stenting. Sixty-six patients were lost at follow-up (18.7%). The remaining 287 patients were analyzed. Median follow-up time was 120 months (100-130 months). The sites of recurrence were anterior compartment (45 patients; 15.7%), posterior (19 patients; 6.6%) and the central (7 patients; 2.5%) ones. Symptoms of prolapse were reported by 18 (6.3%) of patients, while surgical retreatment for prolapse recurrence was required only by 6 (2.1%) women. None chose/required pessary. Persistent positive impact was observed on stress incontinence and voiding symptoms rates ($p<0.0001$). We noted a persistent improvement in all POP-Q points at 10-years time point compared to preoperative assessment, with exception of total vaginal length, which resulted shorter after surgery (10.3 vs 8.7 cm; $p<0.0001$). Premenopausal status and lack of anterior and posterior repair represented long term risk factors for failure.

INTERPRETATION OF RESULTS

Reconstructive pelvic surgery long-term outcomes are poorly known. This can be even more relevant when considering native-tissue repair, in which the recurrence rate is supposed to be particularly unsatisfactory. The present study reports the combination of subjective, objective, functional, and QoL outcomes of USLs suspension for the treatment of uterovaginal prolapse at 10-year follow-up. This represents - to the best of our knowledge - the first work evaluating the outcomes of USLs suspension, and in general of native-tissue repair for uterovaginal prolapse, 10 years after the index surgery. We found that USLs suspension seems to be an effective and safe procedure, with long-lasting effectiveness over time and beneficial impact on functional outcomes.

CONCLUSIONS

Our study demonstrated that native tissue repair through high uterosacral ligaments suspension is a safe and effective procedure for the treatment of uterovaginal prolapse, with long-lasting effectiveness over time and persistence of functional benefits even after 10 years from index surgery. Premenopausal status and lack of anterior and posterior repair represented long term risk factors for failure.

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31 - SAFETY AND EFFICACY OF LOCAL ANESTHESIA FOR PELVIC FLOOR RECONSTRUCTIVE SURGERY: A SYSTEMATIC REVIEW AND META-ANALYSIS

Prodromidou Anastasia, Zacharakis Dimitrios, Douligeris Athanasios, Kalantzis Christos, Hadzilia Sofia, Kathopoulis Nikolaos, Athanasiou Stavros, Grigoriadis Themos

First Department of Obstetrics & Gynecology, Medical School, National and Kapodistrian University of Athens, "Alexandra" Hospital, Athens, Greece

INTRODUCTION AND AIM OF THE STUDY

Local anesthesia (LA) has been proposed as an effective alternative anesthetic modality for the repair of pelvic floor disorders. We aim to review the currently available literature on urogynecological procedures performed under local anaesthesia.

MATERIALS AND METHODS

Four electronic databases were systematically seached for articles evaluating pelvic floor reconstructive surgery under LA with or without sedation.

RESULTS

Nineteen studies (14 non-comparative and 5 comparative), including 1626 patients who had pelvic reconstructive procedures under LA were recruited. Meta-analysis revealed significantly lower mean pain scores in LA group compared to the general-regional anesthesia one (GA/RA) at both 4-6 hours and 8-18 hours postoperatively. Intra-and postoperative morphine use did not differ among patients who received LA and GA during prolapse surgery whereas nausea rates were significantly reduced in LA group compared to RA group 8 hours postoperatively.

INTERPRETATION OF RESULTS

LA with or without sedation represents a safe and efficient alternative anaesthetic technique for urogynecological procedures with improved pain scores in up to 18 hours postoperatively particularly in patients who underwent surgery for SUI.

CONCLUSIONS

LA for pelvic floor surgery is feasible and could be considered if avoiding the systemic effects of general anesthesia and possible complications of regional anesthesia is desired.

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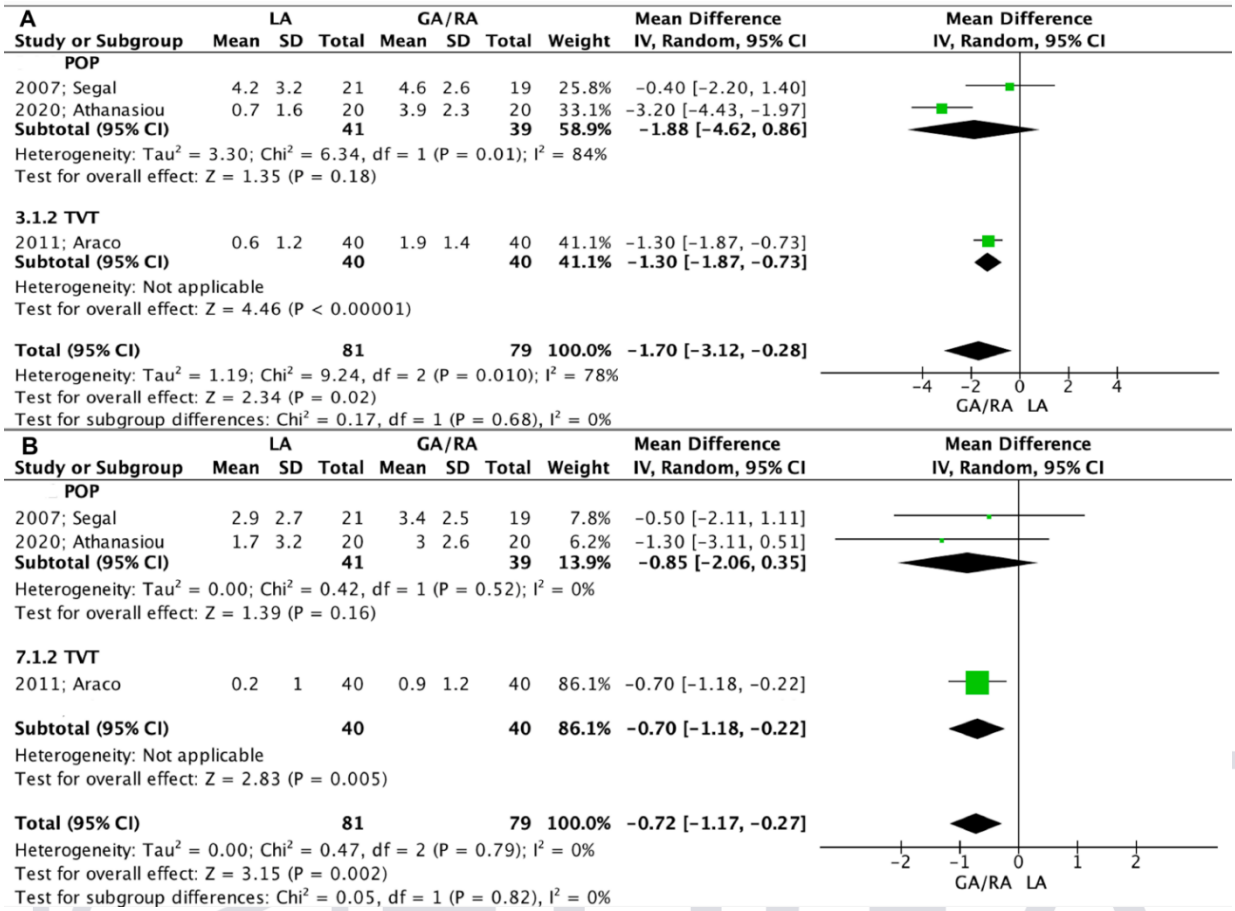
Figure: Forest plot depicting mean scores in LA group compared to GA/RA at a) 4 to 6 hours and b) 8 to 18 hours postoperatively (postoperative pain scores were assessed on a scale from 0 to 10 with score 10 considered the worst pain)



32 - THE ROLE OF LAPAROSCOPIC SURGERY IN THE TREATMENT OF ADVANCED UTERINE PROLAPSE.-A SYSTEMATIC REVIEW OF THE LITERATURE.

Rountis Argirios, Zacharakis Dimitrios, Athanasiou Stavros, Kathopoulis Nikolaos, Grigoriadis Themos

First Department of Obstetrics and Gynecology, National and Kapodistrian University of Athens, Alexandra Hospital, Athens, Greece

INTRODUCTION AND AIM OF THE STUDY

The aim of this review is to investigate and compare all laparoscopic techniques that can be used in surgical repair of advanced uterine prolapse.

MATERIALS AND METHODS

A systematic search of the PubMed (1966–2020), Scopus (2004–2020), Cochrane CENTRAL (1996–2020) and Clinicaltrials.gov (2008–2020) databases was performed for articles published up to December 2020 using the combination of keywords ''severe pelvic organ prolapse" OR "advanced pelvic organ prolapse" AND ''laparoscopic surgery''. Only English-written studies, with patient sample ≥20 and follow-up time ≥12 months were included in this review.

RESULTS

Six studies included in the final synthesis. The main laparoscopic procedures reported were vaginally-assisted laparoscopic sacrocolpopexy (VALS) in 2 studies (33.3%), vaginally-assisted laparoscopic uterine sacropexy (VALUES) in 1 study (16,6%), laparoscopic sacrocolpopexy (LSC) plus laparoscopic supracervical hysterectomy (LSH) in 1 study (16.6%), laparoscopic inguinal ligament suspension (LILS) with uterine preservation in 1 study (16.6%) and laparoscopic uterosacral ligament suspension (LULS) combined with trachelectomy in 1 study (16,6%). All procedures involved mesh placement, except for LULS. Anatomical cure rates were reported 95.7-100% for VALS, 91.4% for VALUES, 97.6% for LSC plus LSH, 94.3% for LILS and 100% for LULS. VALS had the largest amount of intra-operative blood loss (310ml), VALUES was associated with bladder injuries (2.9%) and increased rates of de novo USI postoperatively (8.6%), whilst LILS reported the longest mean operative (163.8 ± 41.3 min) and hospitalization time (5 days). Cases of mesh extrusion were reported after VALS (2.1%) and VALUES (1.4%). Conversions were not reported.

INTERPRETATION OF RESULTS

Success rates were similar (>90%) for all types of laparoscopic intervention, with patients reporting high satisfaction rates (85.7-100%) during a follow-up time ranging from 12 months to 7 years, depending the study.

CONCLUSIONS

It seems that minimal invasive surgery can be used with safety and efficacy as an alternative to open surgery in the treatment of severe uterine prolapse.

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33 - THE EFFECT OF ADVANCED AGE ON POSTOPERATIVE COMPLICATIONS FOLLOWING PELVIC FLOOR REPAIR SURGERIES

Shelef Goni, Rotchild Matan, Sade Shanny, Shoham Vardi Ilana, Y. Weintraub Adi

Ben-Gurion University of the Negev, Department of Public Health, beer-Sheva, Israel, Ben-Gurion University of the Negev, Soroka University Medical Center, beer-Sheva, Israel, Ben-Gurion University of the Negev, Soroka University Medical Center/ Department of Obstetrics and Gynecology, Beer-Sheva, Israel

INTRODUCTION AND AIM OF THE STUDY

Pelvic organ prolapse (POP) may have a substantial impact on quality of life (QoL). The prevalence of POP increases with age; by 2050, due to demographic changes, the number of women ages 65 and older is expected to nearly double, and the demand for care of pelvic floor disorders is expected to grow accordingly. Several studies have attempted to describe risk factors for complications following POP surgeries. Most of the identified risk factors are intra-operative such as the type and duration of the procedure and the amount of blood loss. Advanced age as a risk factor for adverse events is still controversial. While advanced age is associated with a higher prevalence of comorbidities, fear of complications might restrain the choice of surgery for this population. The advantages and disadvantages of surgery should be weighed in advance, and since most patients with POP are elderly, it is vital to best informed regarding this specific population.

Therefor, we investigated whether advanced age has a role in development of peri- and post-operative complications following POP repair surgeries using the validated and standardized Clavien-Dindo classification system.

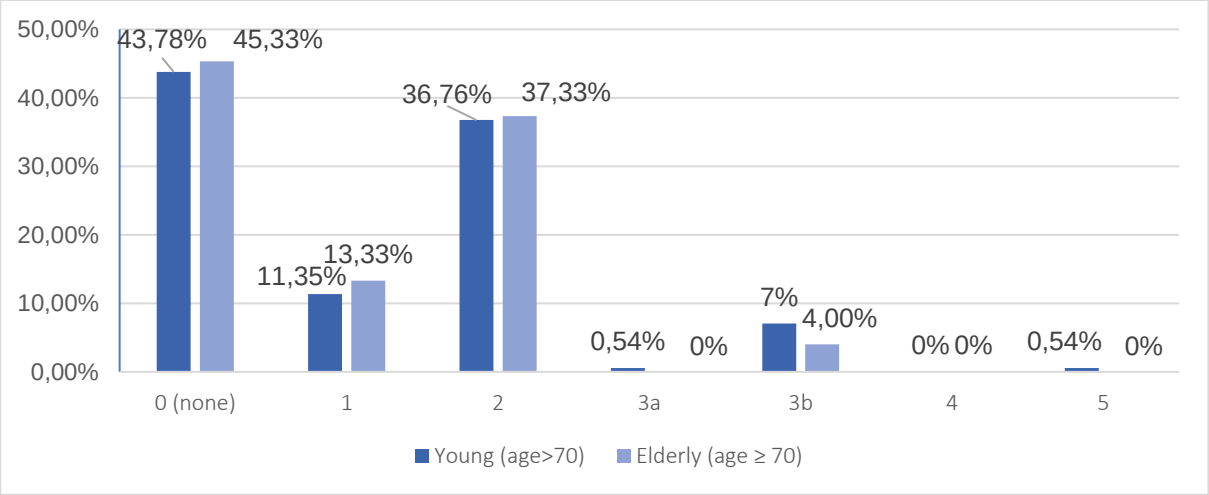
MATERIALS AND METHODS

We conducted a retrospective cohort of 260 women how underwent POP repair surgery in a large tertiary teaching hospital, between the years of 2016-2019. We divided the patients into two groups, young and elderly women using a cutoff age of 70 years. A multivariate logistic regression was used to recognize independent risk factors for peri- and post-operative complications.

RESULTS

POP repair surgeries are safe with the vast majority of patients (around 90%), in both age groups, having no or only mild complications. Complications classified as grade 3 or higher were rare. There were no significant differences between the groups in the severity of postoperative complications. Performing a concomitant hysterectomy increased the risk of complications by 60% and reached borderline significance (p=0.063). in the multivariable analysis, advanced age (>70 years), adjusted for the number of vaginal deliveries and concomitant hysterectomy was not found to be an independent risk factor for peri- and post-operative complications.

Complication grade	Young (age <70)	Elderly (age ≥ 70)	P-value*
No complication (0) (%, n)	43.8 (81)	45.3 (34)	
Minor (1+2) (%, n)	48.1 (89)	50.7 (38)	0.597
Major (3+4+5) (%, n)	8.1 (15)	4.0 (3)	
Total complications (median, IQR)	1 (0-1)	1 (0-1)	0.702



INTERPRETATION OF RESULTS

In our population, advanced age (>70 years), was not found to be an independent risk factor for peri- and post-operative complications, and it was not associated with neither minor nor major post-operative complications.

CONCLUSIONS

Older women could be reassured that according to our findings, while there were significantly higher rates of comorbidities such as diabetes mellitus and hypertension and a higher prevalence and longer duration of menopause, in the advanced age group, older age was not an independent risk factor for peri- and post-operative complications following POP surgery.

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34 - DOES LAPAROSCOPIC SACROCOLPOPEXY MANDATE ROUTINE MESH IMPLANTATION IN ANTERIOR AND POSTERIOR COMPARTMENT?

Rusavy Zdenek, Grinstein Ehud, Ohad Gluck, Abdelkhalek Yara, Deval Bruno

Charles University, Faculty of Medicine in Plzen, Plzen, Czech Republic, Ramsay Santé, Department of Functional Pelvic Surgery & Oncology, Geoffroy Saint-Hilaire, Paris, France, St Joseph University, Hôtel-Dieu de France University Hospital, Beirut, Lebanon, Tel Aviv University, Edith Wolfson Medical Center, Holon, Israel

INTRODUCTION AND AIM OF THE STUDY

Laparoscopic sacrocolpopexy was originally intended for correction of advanced apical compartment prolapse and has become the golden standard in this indication. However, since multiple compartment prolapse is more common than isolated apical compartment prolapse, the technique has been modified by more extensive dissection of the vagina and implantation of the mesh leafs more distally alongside the anterior and posterior vaginal wall to address all compartments at once. The surgery is frequently performed with routine implantation of the mesh into the posterior and anterior compartments to prevent recurrence in the non-operated compartment. However, is it necessary to place mesh into the non-descending compartment? The aim of our study was to compare the long-term outcomes of laparoscopic sacrocolpopexy according to the compartments where mesh was implanted.

MATERIALS AND METHODS

All patients who underwent laparoscopic sacrocolpopexy or sacrohysterocolpopexy between July 2005 and March 2021 were enrolled in this retrospective cohort study. The women were preoperatively evaluated, operated and followed by a single surgeon. The follow-up was starting from 1 month after surgery, and then annually. Since the length of the follow-up was not constant, the last information was used for the outcome analysis. The medical files and surgical reports were used to extract data. In addition, the patients were interviewed by telephone. The women were divided into 3 groups depending on the compartments, where the mesh was implanted concomitantly with apical fixation. Group A – the anterior compartment only, group P - the posterior compartment only. For the primary aim comparison the groups A and P were merged to represent patients with mesh implanted to one compartment only (group AP). In group B, the mesh was implanted into both compartments. A concomitant rectopexy was performed in a few indicated cases. We compared preoperative and intraoperative data as well as complications and long-term outcomes between groups AP and B. In addition, another comparison between groups A and P was performed. The composite definition of surgical failure was prolapse beyond hymen or subjective recurrence or retreatment. The data were compared based on their distribution of normality using a Wilcoxon Two Sample test, Chi-square test or Fisher´s Exact test, p-value < 0.05 was considered statistically significant.

RESULTS

For the analysis, 328 patients were available; group A 108, group P 36, group AP 144, group B 184 patients. 34 women (10.3 %) were lost to follow-up. The mean follow-up was 42.8 months. Table 1 summarizes all demographic, preoperative, operative data including complications and postoperative data in the follow-up including de novo occurrence of pelvic floor disorders comparing groups AP and B. Women with mesh implanted into both compartments were younger with more events in obstetric history (trauma, macrosomic baby, forceps). They were less frequently after a hysterectomy. The operation time was longer in group B, the incidence of complications was slightly higher in group B, however not reaching statistical significance. Mesh erosion was found only in group B. No difference in de novo pelvic floor disorders and pain after the surgery was observed. Similarly, albeit all POP-Q points were higher in group B, the composite surgical failure rate was comparable (Table 1)

A subanalysis comparing groups A and P found no differences in complication rate, clinically meaningful perioperative data and outcome of the surgery. Women in group P were older (67.5 vs. 62.5, $p<0.05$) and more frequently after hysterectomy (44.4 vs. 13.9%, $p<0.05$), no other differences in demographic characteristics were found. The follow-up was longer in group A (50.9 vs. 34.8 months, $p<0.05$). Regarding the POP-Q points location, significant differences were observed preoperatively with negative values in the non-operated compartment. These differences were not observed postoperatively. A clinically unimportant higher suspension of point C was found in group P (-2.6 vs. -4.0, $p<0.05$). No difference in composite surgical failure rate between groups A and P (17.4 vs 17.9%, $p=1.0$) were observed.

Table 1: Single or multi-compartment mesh implantation

	Group AP n=144	Group B n= 184	p-value	test
Age	**63.7±10.5**	**61.0±12.9**	**<0.05**	**a**
BMI	24.8±3.8	24.±3.9	0.22	a
Menopause	**122 (84.7)**	**129 (70.5)**	**<0.05**	b
Parity	2.4±1.2	2.4±1.2	0.90	a
Significant obstetric history	**31 (21.7)**	**86 (46.7)**	**<0.05**	b
Chronic illness	34 (23.8)	44 (23.9)	0.98	b
Prior hysterectomy	**31 (21.5)**	**24 (13.0)**	**<0.05**	b
Prior POP surgery	18 (12.5)	20 (10.9)	0.65	b
Operation time	**85.0±20.5**	**101.4±20.5**	**<0.05**	a
Severe bleeding	0 (0)	2 (1.1)	0.51	c
Bowel injury	1 (0.7)	4 (2.2)	0.39	c
Conversion to laparotomy	1 (0.7)	2 (1.1)	1.00	c
Bladder injury	1 (0.7)	4 (2.2)	0.39	c
Minor complication	5 (3.5)	7 (3.8)	1.00	c
Major complication	3 (2.1)	8 (4.3)	0.36	c
Mesh exposure	0 (0)	2 (1.1)	0.52	c
Days of hospitalization	**2.0±0.8**	**2.1±3.0**	**<0.05**	a
Follow-up (months)	46.8±47.0	40.2±38.7	0.56	a
de novo SUI	32 (28.6)	45 (25.9)	0.68	c
de novo AI	9 (8.0)	6 (3.4)	0.11	c
de novo constipation	10 (9.8)	21 (14.5)	0.33	c
mesh related pain	7 (8.2)	11 (6.9)	0.80	c
Lower back pain	13 (22.4)	18 (22.0)	1.00	c
Pelvic pain	8 (13.8)	13 (15.9)	0.81	c
Postoperative Ba	**-1.8±1.9**	**-2.7±1.5**	**<0.05**	a
Postoperative C	**-3.0±2.7**	**-4.4±2.3**	**<0.05**	a
Postoperative Bp	**-1.8±1.8**	**-2.8±1.5**	**<0.05**	a
POP beyond hymen	5 (6.3)	12 (7.8)	0.79	c
Surgical failure	20 (17.5)	24 (13.8)	0.41	c

Data expressed as mean ± standard deviation for normally distributed continuous variables and as n (%) for categorical variables. Chronic illness defined as diabetes, hypertension, vascular and/or neurologic disease. Minor and major complications classified according to the Clavien Dindo classification. Surgical failure defined as a prolapse beyond hymen or subjective recurrence or retreatment in any stage of the follow-up.
a Wilcoxon Two Sample test, b Chi-square test, c Fisher´s Exact test

INTERPRETATION OF RESULTS

Implantation of one leaf of mesh into the descending compartment only is not associated with a recurrence in the non-operated compartment in a 3.5-year follow-up. Implanting the mesh into both compartments may be associated with a slightly increased risk of complications and operating time and better anatomic outcome. However, the composite surgical failure rate taking additionally into account subjective recurrence and retreatment is comparable.

CONCLUSIONS

Treatment of a single compartment with one mesh by laparoscopic sacrocolpopexy is a safe and effective option.

35 - INTRA-OPERATIVE RESULTS AND ANATOMICAL OUTCOMES ONE YEAR AFTER VAGINAL VAULT AND CERVICAL SUSPENSION DURING SACROSPINOUS LIGAMENT FIXATION.

Paulina Szymczak, Dariusz Grzegorz Wydra, Magdalena Emilia Grzybowska

Medical University of Gdansk, Department of Gynecology, Gynecological Oncology and Gynecological Endocrinology, Gdansk, Poland

INTRODUCTION AND AIM OF THE STUDY

Efforts to effectively treat the apical prolapse and reduce its recurrence are now being made in many countries. Sacrospinous ligament fixation (SSLF) is a widely known technique for restoring apical support. The study aimed to analyze and compare the intra-operative results and anatomical outcomes of the vaginal vault and cervical suspension during SSLF at 12 months follow-up.

MATERIALS AND METHODS

An IRB-approved observational study of 66 patients who received SSLF for III-IV Pelvic Organ Prolapse Quantification (POP-Q) stages was conducted at a university-based medical center. Five patients out of 66 were lost during follow-up and excluded from the study - one patient died, and 4 refused a follow-up visit. Outcome measures included intra-operative complications according to the Clavien-Dindo (C-D) classification, change in hemoglobin level, levels of pre- and post-operative pain in Visual Analogue Scale (VAS), concomitant procedures, anatomical cure rate (points C, Aa, Ba, Ap, Bp), symptoms of de novo or persistent urinary incontinence and assessment of sexual activity. Baseline characteristics and follow-up results at 12 months were evaluated. Surgical failure was defined as the presence of point C ≥-1or apical defect retreatment (pessary or surgery). Chi-squared test and analysis of variance (ANOVA, between-subject, and within-subject) were performed for necessary comparisons. The p-value of <0.05 was considered statistically significant.

RESULTS

Out of the 61 patients enclosed in the study, 43(70.5%) were diagnosed with POP-Q III stage and 18(29.5%) with POP-Q IV. Mean age and BMI were 61.8±8.7 years and 27.6±4.1 kg/m2. Mean operative time and hospital stay were 69±20.4 min and 2.7±1.0 days, respectively. The study included 22 patients in vaginal vault suspension and 39 patients in the cervical suspension group. The operative time in the vaginal vault group was statistically shorter (p=0.003). The groups did not differ in terms of change in hemoglobin level, length of stay, pain in VAS, C-D intraoperative complication rate, and symptoms of UI after surgery. The overall severe complication rate (C-D≥III grade) was 1.6% (Table 1). The most common adverse event was buttock pain in 9(14.8%) patients, which resolved spontaneously within 4 weeks. After surgery, significant improvement was observed for all points: Aa, Ba, Ap, Bp, and C in both groups (p<0.01). However, patients from the cervical group had significantly smaller improvement in Ba and Ap points (p≤0.005). SSLF was not associated with shortening total vaginal length (TVL) in both groups (Table 2). The apical defect recurrence after 12 months was 27.9%, with 36.4% and 23.1%, in the vaginal and cervical groups, respectively (p=0.27) (Table 3). Twenty-six (96.3%) patients remained sexually active after the surgery (p>0.05).

Table 1 Patient characteristics

	Vaginal vault suspension (n=22)	Cervical suspension (n=39)	P-value
Age (years)	60.6±9.3	62.4±8.3	0.45[a]
BMI (kg/m^2)	27.5±4.4	27.6±4.0	0.90[a]
Postmenopausal	20 (91%)	35 (89.7%)	0.88[b]
Parity	3±1.3	2.3±0.8	**0.01**[b]
Pre-operative POP-Q stage 3 4	 11 (50%) 11 (50%)	 32 (82.1%) 7 (17.9%)	 **0.01**[b]
Previous POP surgery	6 (27.3%)	6 (15.4%)	0.26[b]
Previous UI surgery	1 (4.5%)	3 (7.7%)	0.63[b]
Operative time (min)	59±15.2	74.7±21	**0.003**[a]
Change in hemoglobin level (g/dL)	-1.5±0.6	-1.6±0.6	0.70[a]
Inpatient stay in days	2.6±0.8	2.8±1.0	0.60[a]
Concomitant procedures anterior colporrhaphy posterior colporrhaphy Kelly plication	 3 (13.6%) 13 (59.1%) 0	 18 (46.2%) 24 (61.5%) 1 (2.6%)	 **0.01**[b] 0.90[b] X

Preoperative pain intensity in VAS scale	1.4±1.9	0.9±1.3	0.24[a]
Postoperative pain intensity in VAS scale at 12 months follow-up	1.2±2.4	0.8±1.9	0.46[a]
Intra-operative complications C-D I II III	 5 (22.7%) 0 1 (4.5%)	 7 (18%) 1 (2.5%) 0	 0.55[b]
UI after surgery: SUI de novo SUI persistent UUI de novo UUI persistent Mixed UI de novo Mixed UI persistent UI de novo total UI persistent total	 3 (13.6%) 2 (9%) 0 0 1 (4.5%) 3 (13.6%) 4 (18.2%) 5 (22.7%)	 2 (5.1%) 3 (7.7%) 2 (5.1%) 4 (10.3%) 1 (2.5%) 9 (23.1%) 5 (12.8%) 16 (41%)	 0.57[b] 0.15[b]
Positive cough stress test de novo persistent	 1 (4.5%) 6 (27.2%)	 4 (10.3%) 9 (23.1%)	 0.70[b]
Sexually active Preoperative Postoperative	 11 (50%) 11 (50%)	 16 (41%) 15 (38.5%)	 0.50[b] 0.38[b]

Data presented as mean ± standard deviation or n (%). BMI – the body mass index, C-D – Clavien-Dindo, POP – pelvic organ prolapse, POP-Q – Pelvic Organ Prolapse Quantification, SUI – stress urinary incontinence, UUI – urgency urinary incontinence, UI – urinary incontinence, VAS – Visual Analogue Scale, [a] between-subject ANOVA test, [b] chi-squared test

Table 2 POP-Q measurements as defined by IUGA-ICS prolapse staging preoperatively and at 12 months follow-up shown in centimeters

	Vaginal vault suspension (n=22)				Cervical suspension (n=39)				Comparison of improvement between groups
	Pre-operative	At 12 months	Improvement	P-value	Pre-operative	At 12 months	Improvement	P-value	P-value
Aa	1.1±2.2	-1.2±1.8	-2.3±2.5	<0.01[a]	0.9±2.0	-1.1±2.0	-2.0±2.3	<0.01[a]	0.62[a]
Ba	5.3±2.7	-0.3±2.5	-5.5±2.7	<0.01[a]	2.8±3.5	-0.4±2.5	-3.1±3.2	<0.01[a]	**0.004**[a]
Ap	1.3±2.0	-2.0±1.3	-3.3±2.3	<0.01[a]	-0.7±2.1	-2.3±1.1	-1.6±2.2	<0.01[a]	**0.005**[a]
Bp	4.4±3.8	-0.8±3.0	-5.2±4.3	<0.01[a]	0.9±4	-2.2±1.5	-3.1±3.8	<0.01[a]	0.05[a]
C	6.5±2.7	-1.8±5	-8.3±4.5	<0.01[a]	5.0±2.3	-4.4±4.4	-9.4±4.5	<0.01[a]	0.36[a]
TVL	8.7±1.8	7.8±1.4	-0.9±1.5	0.013[a]	10.4±1.2	9.3±1.4	-1.1±1.2	<0.01[a]	0.54[a]

[a] within-subject ANOVA test

Table 3 Surgical failure and reoperations after 1-year follow-up

	Vaginal vault suspension (n=22)	Cervical suspension (n=39)	P-value
Surgical failure	8 (36.4%)	9 (23.1%)	0.27[a]
Reoperation for apical prolapse	5 (22.7%)	6 (15.4%)	0.47[a]

[a] - chi-squared test

INTERPRETATION OF RESULTS

At 12 months follow-up, the anatomical success rate was observed in 72.1% of patients, the mean values of all POP-Q points were significantly improved. The improvement in point C did not differ between the vaginal and the cervical group (p=0.36). Fixation to the cervix was connected with the prolonged operative time (p=0.003), which could result from a higher number of concomitant anterior colporrhaphies in this group of patients (p=0.01). Severe complications after SSLF were rare. The most common complication was buttock pain (C-D grade I).

CONCLUSIONS

SSLF had a low rate of severe intra-operative complications. Comparing vaginal vault and cervical suspension during SSLF, no difference in the effectiveness of the apical defect treatment was noted at 12 months follow-up.

36 - LEVATOR ANI MUSCLE AVULSION IN PATIENTS WITH PELVIC FLOOR DYSFUNCTION – EXPERIENCE FROM A TERTIARY CENTER

Serrano Silvia, Henriques Alexandra, Pereira Inês, Valentim-Lourenço Alexandre

Centro Hospitalar Lisboa Universitário Norte, Department of Obstetrics, Gynecology and Reproductive Medicine, Lisbon, Portugal, Centro Hospitalar Universitário Lisboa Norte, Department of Obstetrics, Gynecology and Reproductive Medicine, Lisbon, Portugal

INTRODUCTION AND AIM OF THE STUDY

The levator ani muscle (LAM) is important for pelvic floor support. Defects of the puborectal insertion in the pubis over the years lead to an increased risk for pelvic organ prolapse (POP) and eventually to the emergence of prolapse symptom years later.

The aim of our study is to determine the prevalence of LAM avulsion by transperineal ultrasound (TPUS) in women with pelvic floor dysfunction. The second outcome is to evaluate the association between total avulsion and the type, stage and number of POP compartments involved.

MATERIALS AND METHODS

This was a retrospective cohort study performed in a tertiary hospital in urogynecological patients. We collected data from the clinical examination, objective urogynecological examination according to the POP-Quantification Systemand and the 4D transperineal ultrasound. Each vaginal compartment of POP was classified for the stage of prolapse, and total number of involved compartments identified. According to previous studies, an abnormal levator-urethra gap of 25 mm or greater indicated levator avulsion, if this change to identify in 3 consecutive cuts is considered total avulsion of the LAM. The presence or absence of unilateral/bilateral avulsion has been described. Generalized logit models were used to assess the association between type of avulsion and type, stage and number of prolapse.

RESULTS

Eight hundred and forty-eight women with pelvic floor disfunction were included in the analysis. LAM avulsion was found in 259 (30.5%) patients, of which 195 had total LAM avulsion (11.7% unilateral and 11.3% bilateral avulsion). Of the 589 (69.5%) patients without LAM avulsion, 420 (71,3%) had POP. Patients with LAM avulsion were 4.13 (confidence interval (CI): 2.60-6.57) times more likely to have POP than patients with no avulsion. Among patients with LAM avulsion, those with total avulsion were 4.7 (CI: 1.98 – 11.5) times more likely to have POP than patients with partial LAM avulsion. Women with total bilateral avulsion were 4.41 (CI: 0.91 - 21.3) times more likely to have POP than women with total unilateral avulsion.

Out of the 605 women who had POP, 273 (32.2%) had POP-Q stage II and 332 (39.1%) had POP-Q stage III or IV. Women with severe stage POP were 3.13 (CI: 1.90-5.16) times more likely to have bilateral total LAM avulsion than patients with mild stage POP.

Of the 605 patients evaluated, 286 (47%) had only one affected compartment, while 121(20%) had a multicompartment prolapse. Patients with three POP compartments were 2.75 (CI: 1.53–4.94) and 3.39 (CI: 1.93 – 5.93) times more likely to have unilateral and bilateral total LAM avulsion, respectively, than women with POP in one compartment.

The anterior compartment was the most frequently affected compartment (156/605 27.4%). Patients with anterior compartment prolapse were 1.79 (CI: 1.21 – 4.46) times more likely to have bilateral total LAM avulsion than women with posterior compartment prolapse. If they had anterior and apical compartment prolapse, the risk of having bilateral LAM avulsion was 4.31 (CI: 1.74 – 10.68). The risk is much higher for patients with three compartments involved, since they were 6.10 (CI: 2,52 – 14,7) times more likely to have bilateral total LAM avulsion than women with only posterior compartment prolapse.

INTERPRETATION OF RESULTS

In this study, we found that 30.5% of women with pelvic floor disorders had LAM avulsion, of which 23% had total LAM avulsion. Data in the literature report a prevalence of total LAM avulsion of 18.8% in women evaluated at 6–12 months postpartum. One possible explanation for this higher LAM avulsion rate is the fact that we included women with symptoms of pelvic organ dysfunction.

We found that 71,3% of women with POP did not present LAM avulsion. According to the literature, the development of POP is multifactorial, with the risk factors most associated with its occurrence being older age, obesity, chronic constipation, collagen weakness and, above all, vaginal delivery.

It has been observed that women with LAM avulsion were 4.13 times more likely to have prolapse than women without avulsion. In our study, there was also a greater association between total LAM avulsion and POP than partial LAM avulsion and POP. Women with total bilateral avulsion were 4.41 times more likely to have prolapse than women with total unilateral avulsion. LAM avulsion results in reduced contractility of the pelvic floor muscle, makes the muscle more elastic by about 50% and leads to excessive hiatal distensibility or ballooning, which is greater when the avulsion is bilateral.

We found that women with severe prolapse and three compartments involved were much more likely to have bilateral LAM avulsion. This fact agrees with a previously published study.
LAM evaluation, especially in women with advanced stages of prolapse or with more than one compartment involved, helps to advise on treatment options and effectiveness.
In our study, we found that patients with anterior compartment POP are 1.91 and 1.79 times more likely to have total unilateral or bilateral avulsion, respectively, than women with posterior compartment POP. On the other hand, patients with POP of the anterior and apical compartment had a higher risk of having total LAM avulsion (RR 4.31, 95% CI 1.7-2.1). Studies showed a strong correlation between the occurrence of POP from the anterior wall and the middle compartment. Although defects in the LAM are strongly correlated with the development of cystocele, the fact that anterior wall prolapse can develop without LAM damage suggests that other defects in the support system may be important. The prolapse of the posterior compartment results from a defect in the rectovaginal septum and/or perineal body, with lower association to LAM avulsion.

CONCLUSIONS

The prevalence of LAM avulsion is high in patients with urogynecological symptoms. Patients with total LAM avulsion are at greater risk of developing POP and have more advanced stage of prolapse and involvement of multiple compartments than patients with no avulsion.

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37 - PRESSURE FLOW STUDY PARAMETERS AND RANGES IN A LARGE COHORT OF WOMEN WITH SYMPTOMS OF LOWER URINARY TRACT DYSFUNCTION, RELATED TO AGE AND VOIDING EFFECTIVITY (PVR).

Rosier Peter

University Medical Center Utrecht, Functional Urology Urogynecology and Neurourology, Utrecht, Netherlands

INTRODUCTION

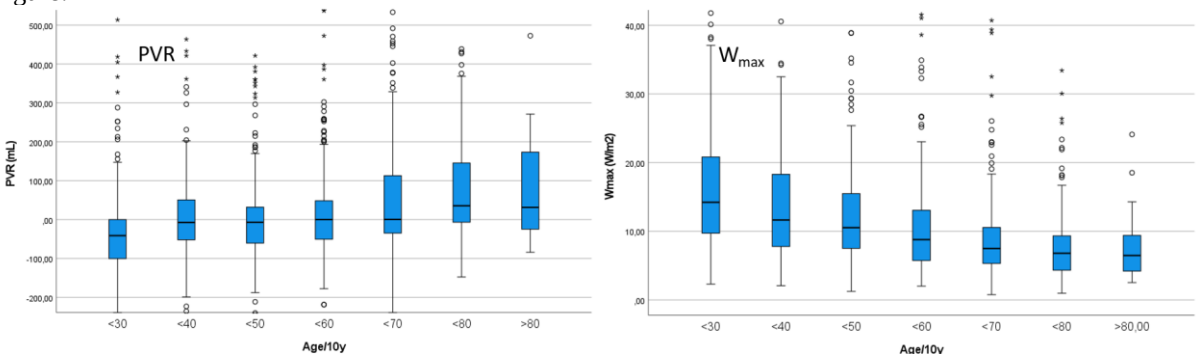
Because women have an (anatomically) inherently lower bladder resistance than men and 'significant' bladder obstruction is much less common (due to the 'absence of a prostate'), epidemiology of micturition disorders, being less prevalent in women than in men, is difficult to obtain. The knowledge about urodynamic voiding parameters and ranges in women is sparse and the associations of these with PVR and decreased flowrate (or e.g., with increasing age) with bladder outflow obstruction (BOO) and / or detrusor underactivity (DU) are only patchy and / or in small series reported. We present an analysis of urodynamic pressure flow (PFs) studies in a wide age range of symptomatic women with the aim of providing value ranges of PFs parameters, associations with PVR and flowrate and to evaluate BCI for female voiding.

MATERIAL AND METHODS

Retrospective review of urodynamic studies conducted in all women tested between 2010 and 2020. Analysed studies were those for non-neurogenic dysfunction in patient able to void during standard urodynamic testing. PVR and PFS parameters were assessed after pressure peaks and flowrate correction. Calculations included BCI and WFmax to assess detrusor contractility (work) and BOOI and URA to grade BOO. BCI includes ‘k’ which is 5 in the usual (ICS) formula: pdetQmax + 5Qmax. We added k=1 (BCI k=1) and BCI k=10 to the database in this study to reduce or augment the influence of flowrate in the formula because BCI k=1 is reported to be more consistent with isovolumic maximum pressure in women in one publication. Association of PFS (contraction) parameters with age and PVR is assessed and correlations are calculated.

RESULTS

A total of 1260 studies were analyzed. Mean age was 50.7y (SD 17.5). Indications were: SUI 8%; UUI 13%; MUI 42%; OAB 15%; voiding symptoms 10% & other (12%).
PFS parameters were: Qmax 18.1 (2.5-71.7) mL/s; PdetQmax 26.7 (-10-199) cmH2O; URA (bladder outflow resistance) 12.7 (0.03-87.5) cmH2O; BOOI 12.5 (-134-155); Wmax 11.6 (0.8-20.9) W/m2; BCI 117.2 (10.7-400) (cmH2O). BOO was diagnosed in 36 (2.9%) by a BOOI>40 and 6.5% according to BOOI>30. DU was diagnosed in 35.6% (BCI K5) and 23.1% had PVR>80mL. Fig. shows the association of PVR and contractility with age.
ROC analysis shows AUC of 0.730 and 0.752 for BCI and Qmax to predict PVR (>80mL) and 0.822 for Wmax. Changing k in BCI to 1 reduces AUC (to predict PVR) to 0.620 and changing k to 10 results in AUC 0.745.
Figure:



CONCLUSION

We report an analysis of PFS results in a large cohort of symptomatic women. BOO is rare; contractility can be assessed with Wmax and BCI. These are sensitive to predict PVR. Changing k in BCI does not improve association with PVR. Contractility trended downward and PVR upward with advancing age.

38 - RARE CASE OF INTESTINAL OBSTRUCTION DUE TO ENTEROCELE

Bonetti Daniela, Haemmerle Beatrix, Schmid Seraina, Ardueser David, Keller Nicole

Gynecology and Obstetrics, Hospital Grabs, Grabs, Switzerland, Surgical Department, Hospital Grabs, Grabs, Switzerland

INTRODUCTION AND AIM OF THE STUDY

We present the very rare case of symptomatic ileus due to vaginal enterocele.

MATERIALS AND METHODS

A 90-year-old woman suffering from pneumonia reports increasing abdominal pain and nausea. An x-ray shows intestinal air-fluid-levels. Suspecting intestinal obstruction, a CT-scan confirms the diagnosis. Preparing surgery urinary catheterization was impossible for the emergency nurse because of pelvic organ prolapse. Therefore the gynecologist on call is consulted.

RESULTS

Abdominal hysterectomy was done many years ago. The examination shows POP-Q stage III pelvic organ prolapse including enterocele with small intestine inside, vaginal vault prolapse, rectocele and cystocele with urinary retention from about 1000ml. After careful reposition of the prolapse and urinary catheterization, the abdominal pain and nausea decrease rapidly. To prevent a recurrent prolapse a pessary is inserted. By gradual transition to normal diet peristalsis becomes normal. After removing the urinary catheter micturition with pessary inside is normal with complete emptying of the bladder.

INTERPRETATION OF RESULTS

Intestinal obstruction is a common surgical emergency. But symptomatic ileus due to vaginal enterocele is very rare. Untreated intestinal obstruction leads to perforation, septic shock and death.
It is crucial to think about the possibility of vaginal herniation of small bowel in patients with symptomatic ileus.

CONCLUSIONS

An interdisciplinary approach even in a clear surgical case like intestinal obstruction is important if the patient suffers from pelvic organ prolapse. Because pelvic organ prolapse leads not only to the rare cause of symptomatic ileus, but frequently to acute abdomen by urinary retention. The goal of good practice in emergency units is a careful examination before each surgical intervention. In our case the gynecological examination prevented the old and frail patient from surgery.

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39 - USE OF HIGH POWER RADIO FREQUENCY AND TWO CHANNELS IN THE SOLUTION OF UROLOGICAL AND GYNECOLOGICAL PATHOLOGIES

Rodriguez Lastra Jesus, Pinero Mendez Ester

Clinica Inneo, Phisiotherapy, Barcelona, Spain, Universidad De Carabobo, Departamento De Ciencias Fisiologicas, Valencia, Venezuela

INTRODUCTION

TECARTERAPY devices create an electric field in tissue causing molecular movement of charged particles, generating heat. At temperatures between 40 and 45 ° C, induces fibroblasts produce collagen, activating heat shock proteins and inflammatory cascade initiation. Study objective is show TECARTERAPY´effects on urogenital system in both sexes

METHODS

30 patients, 10 men up to 65 years age with post-radical prostatectomy urinary incontinence. 10 women, mean age 54.8 years, with vaginal laxity and dryness, 10 women, mean age 57.5 years, with sexual dysfunction. A 70-year-old patient with uterine prolapse. TECARTERAPY was applied with C-500 CAPENERGY. Prolapse patient received 4 sessions at 39 ° C in the perineum externally

RESULTS

Changes were found in pain and strength variables, from 5.90 ± 3.98 to 1.30 ± 2.54, $p = 0.002$ and from 3.30 ± 1.49 to 4.80 ± 0.42, $p = 0.005$. 100% improved sexual satisfaction. And from 1.90 ± 0.99 to 4.10 ± 0.56, $p = 0.000$ for vaginal dryness and 2.17 ± 0.98 to 4.17 ± 0.40, $p = 0.003$ for laxity. In men decrease symptoms of urinary leakage and bladder filling $p = 0.001$.

CONCLUSIONS

Radiofrequency is innocuous treatment without collateral effects increase vascularity, collagen alteration and creation new , production of growth factors, are important factors in pelvic floor reinforcement and anti-inflammatory effects2, improve urological and gynecological symptoms in both sexes. Patients are satisfied or very satisfied. Innovative treatment has improved LQ. Radiofrequency is safe method, without discomfort and side effects

40 - SINGLE-INCISION VAGINAL MESH INSERTION FOR RECURRENT VAGINAL VAULT PROLAPSE AFTER RADICAL CYSTECTOMY AND RADICAL HYSTERECTOMY WITH IRRADIATION; A CASE REPORT

Nemeth Zoltan, Farkas Balint

Hospital St. John of God, Department of Gynecology, Wien, Austria, University of Pecs, Department of Obstetrics and Gynecology, Pecs, Hungary

INTRODUCTION:
The operative management of Pelvic Organ Prolapse in case of female patients after radical cystectomy is extremely challenging, especially in recurrence cases. Currently there is limited data in the literature addressing this issue.

OBJECTIVE:
Hereby we would like to present a vaginal treatment option and outcome of such a case.

METHODS:
5 month after radical robot assisted cystectomy, due to high grade invasive urethelial cc. (pT4a N0,L0,V0,R0) a 74-year-old , sexually inactive female patient presented to our department with stage 4 enterocele and vaginal vault prolapse. In the medical history 43 years ago radical hysterectomy (Piver 3) was revealed followed by post. operative irradiation and brachytherapy, due to invasive cervical cancer. The patient was non eligible for conservative treatment, and both ring and cube pessary treatment attempts were failed. After informed consent we, performed a colpocleisis, after which the histology of vagina revealed only granulation tissue. After 6 month the prolapse has recurred (3-cm enterocele anterior to the colpocleisis scar). The patient suffered from discomfort and vaginal discharge.

RESULTS:
8 months after the initial intervention, we carried out a re-operation with mesh reinforcement. In order to insert the mesh, the hernial sac was opened, the prolapsed intestines were repositioned, and a peritoneal flap was attached retropubically. With this approach we managed to position the graft extraperitoneally. We used an ultralightweight monofilament polypropylene mesh (21g/m2, HexaPro - A.M.I.) In order to fix the individually tailored, trapeze shape graft laterally safe in the pelvis with i-Stitch® instrument fixation (A.M.I.). Three sutures of 2/0 Prolene were placed on each side of the pelvis in a symmetrical fashion. The firs point of the fixation was the tendinous arch at the ischiadic spine on both sides. The second sutures were fixed in the middle of the tendineus arch and the third point of fixation was the tendineus arch of the pubic bone of both sides. The mesh was ventral fixed with a 2/0 Prolene suture under the symphysis tuberosity and dorsal with a 2/0 Prolene suture to the perineal body. To be able to cover the mesh the bulbospongiosus muscles were sutured together with interrupted 2/0 Vycril sutures. The skin of the Labia minores was sutured with a 3/0 Monosyn running suture. The duration of inpatient stay was 5 days.

CONCLUSIONS:
The patient after 12 month is symptomless with no sign of recurrence or mesh erosion. Her Patient Global Impression of Improvement (PGI-I) Scale is 1 (very much better).

Figure 1.: Preoperative vaginal ultrasound scan image of the prolapsed vaginal vault (A), and postoperative TVS image of the implanted graft (arrows -B).

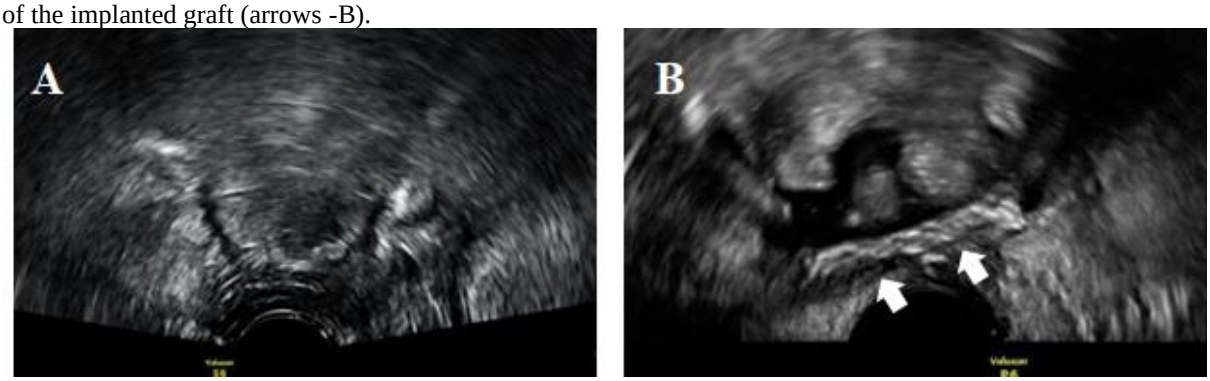
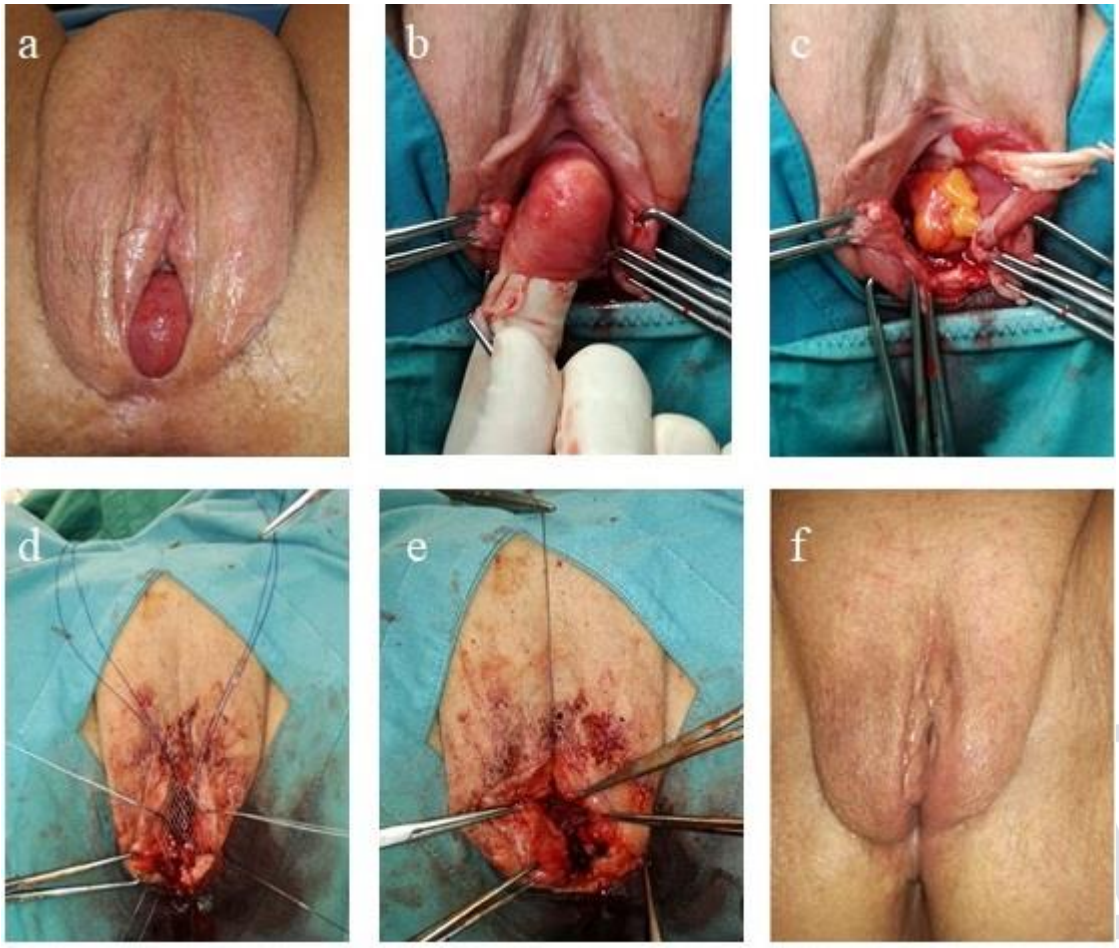


Figure 2.: Step by step demonstration of the operative intervention. Due to a POP-Q Stage III enterocele (a) incision of the peritoneum had been performed (b), which revealed the abdominal cavity (c). It was followed by the insertion a HaxaPro PP mesh graft antero-laterally fixed into the pelvic wall with sutures (d-e). No signs of recurrence after 12 month postoperative (f).



41 - EFFECT OF AGE ON SURGICAL OUTCOMES AND COMPLICATION IN WOMEN UNDERGOING LAPAROSCOPIC SACROHYSTEROPEXY AND SACROCOLPOPEXY: A PROSPECTIVE STUDY

Gluck Ohad, Grinstein Ehud, Abdelkhalek Yara, Rusavy Zdenek, Deval Bruno

Geoffroy Saint-Hilaire, Ramsay Santé, Geoffroy Saint-Hilaire, Ramsay Santé, Paris, France

INTRODUCTION:

Laparoscopic sacrocolpopexy/ sacrohysteropexy is considered as the treatment of choice for pelvic organ prolapse (POP). As the world population is rapidly aging, it is not surprising that more women of advanced age seek care.

OBJECTIVE:

Our aim was to compare perioperative and long-term outcomes of laparoscopic sacrocolpopexy/ sacrohysteropexy in different groups of age.

METHODS:

This was a prospective study. All the patients who underwent laparoscopic sacrocolpopexy/ sacrohysteropexy at our institute, between July 2005 and December 2019 were prospectively evaluated preoperatively and postoperatively (starting from 1 month after surgery, and then annually). In addition, their medical files and surgical reports were reviewed. All surgeries were made by single surgeon. The study population was divided to three groups, according their age at time of surgery: group 1- younger than 65 years, group 2- between 65-75 years, and group 3- older than 75 years. We compared patients' demographics, surgical characteristics, perioperative complications, and immediate and long-term outcomes, between the groups.

RESULTS:

A total of 347 women were included: group 1: (n=192, 55.3%), mean age 53.4±8.2; group 2- (n=98, 28.2%), mean age 69.2±2.9; group 3 (n=57, 16.4%), mean age 79.3±3.5 (p<0.001). The older patients were less married (group 1- 82.3%, group 2- 72.5%, group 3- 54.4%; p<0.001), sexually active (group 1- 35.4%, group 2- 27.5%, group 3- 19.3%; p=0.05), and had lower rate of past obstetric trauma (group 1- 27.6%, group 2- 23.5%, group 3- 3.5%; p<0.001), however they had higher rates of previous hysterectomy (group 1- 11.4%, group 2- 17.3%, group 3- 31.5%; p=0.005), as compared to the younger patients. The rates of perioperative complications, as well as long term complications or recurrence were similar between the groups.

CONCLUSIONS:

Laparoscopic sacrocolpopexy and/ or sacrohysteropexy is associated with low rates of perioperative and long- term complications. The rates of complications and/ or long-term results are not affected by patients' age.

	Group 1 N= 192	Group 2 N= 98	Group 3 N= 57	P value
Background characteristics				
Age	53.4±8.2	69.2±2.9	79.3±3.5	<0.001
Body mass index (kg/m^2)	24.4±4.1	25.0±4.3	23.3±4.2	0.3
Chronic illness	41 (21.3)	26 (26.5)	11 (19.3)	0.49
Married	158 (82.3)	71 (72.5)	31 (54.4)	<0.001
Sexually active	68 (35.4)	27 (27.5)	11 (19.3)	0.05
Parity	2.4±1.0	2.2±1.3	2.5±1.5	0.2
Obstetric trauma	53 (27.6)	23 (23.5)	2 (3.5)	<0.001
Prior Hysterectomy	22 (11.4)	17 (17.3)	18 (31.5)	0.005
Prior abdominal surgery	103 (53.65)	62 (63.3)	38 (66.7)	0.11
Hormonal therapy	17 (9.7)	13 (13.3)	5 (9.3)	0.6
Perioperative outcome				
Operative time	93.2±22.5	93.5±25.4	86.4±33.1	0.6
Hospitalization	2.0±1.7	1.8±0.9	2.1±1.1	0.2
Haemorrhage	3 (1.5)	0 (0)	1 (1.7)	0.48
Intestinal injury	2 (1.0)	0	0	0.68
Bladder injury	3 (1.6)	2 (2.0)	0	0.84
Other complications	3 (1.5)	1 (1.0)	2 (3.5)	0.5
Reoperation due to complications	12 (6.2)	1 (1.02)	4 (7.0)	0.1
Long term results and complications				
Follow-up duration	69.8±48.9	84.6±53.0	56.2±13.9	0.5
Lumbar pain	15 (7.8)	8 (8.0)	5 (8.8)	0.9
Pelvic pain	5 (*5.3*)	1 (1.6)	2 (6.3)	0.4
Dyspareunia	17 (9.4)	8 (9.9)	7 (15.6)	0.5
Mesh exposure	2 (*1.1*)	0 (0)	0 (0)	0.06
Prolapse recurrence	14 (*7.3*)	15 (15.3)	8 (14.0)	0.07

42 IS RICHTER´S SACROSPINOUS LIGAMENT COLPOPEXY AN EFFICIENT TREATMENT? OUTCOMES IN A SERIES OF 70 PATIENTS

González García Alejandro, Martín González Adela, Martínez Población María, Beatriz Pardal Sánchez

Hospital Valle del Nalón, Department of Obstetrics and Gynecology, Langreo, Spain

INTRODUCTION AND AIM OF THE STUDY

Vaginal vault prolapse is a common clinical entity, usually as a complication following vaginal hysterectomy.
Treatment options included abdominal and vaginal surgical interventions. This procedure consists in support the vagina by attaching the top of it to the right sacrospinous ligament, running from the ischial spine to the sacral bone. Two or three sutures are placed through the strong ligament and secured to the top of the vagina
To analyze the evolution after five years of the vaginal walls static in cases of vaginal vault treated via sacrospinous ligament colposuspension following the Nichols-Richter´s technique, as well as to detect any complications occurred during surgery.

MATERIALS AND METHODS

A descriptive, retrospective study of 70 sacrospinous colposuspension cases undertaken in our service between may 2012 and june 2016 which also required additional, simultaneous surgical procedures (these being the cause for a major percentage of the complications) was carried out.

RESULTS

Results are shown in "real form", based on the findings of the vaginal static both before and after the procedure, and in "virtual form", applying the evolutive probability formulae of the survival analysis acording to the number of patients which had reached each of the different follow-up intervals
Anterior vaginal wall, posterior vaginal wall and vaginal vault prolapse rates were assesed before surgery, (table 1) on the first visit two monts after surgery (table 2) and on the last visit for each patient. (table 3)
In order to determine the average relapse rates (both globally in each visit and for each prolapsed component) the same numerical value as the ordinal value on the simplified POP-Q (S-POP-Q) system is assigned.

BEFORE SURGERY (N=70)

	IN SITU	ST. 1	ST. 2	ST. 3/4	AVERAGE
ANT. VAG. WALL	2	12	22	34	2,24
VAULT	0	3	28	39	2,39
POST. VAG. WALL	2	12	27	29	2,11

GLOBAL AVERAGE 2,25

Tabla 1

FIRST VISIT (N=70)

	IN SITU	ST. 1	ST. 2	ST. 3/4	AVERAGE
ANT. VAG. WALL	53	16	1	0	0,31
VAULT	66	4	0	0	0,06
POST. VAG. WALL	62	6	1	1	0,13

GLOBAL AVERAGE 0,17

Tabla 2

LAST VISIT (N=64)

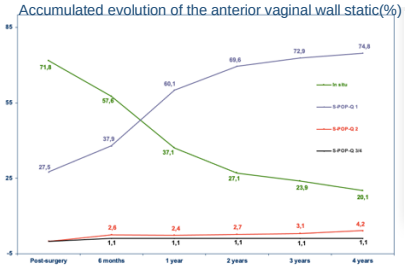
	IN SITU	ST. 1	ST. 2	ST. 3/4	AVERAGE
ANT. VAG. WALL	23	29	11	1	0,83
VAULT	51	11	1	1	0,23
POST. VAG. WALL	50	10	2	2	0,28

GLOBAL AVERAGE 0,45

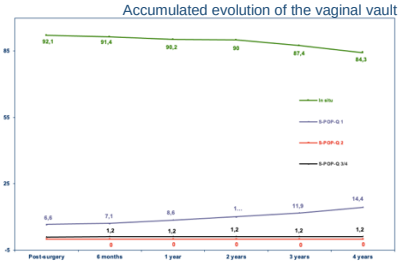
Tabla 3

The next graphs show the accumulated evolution (in percentage) of the vaginal static (I.e. anterior vaginal wall, posterior vaginal wall and vaginal vault) on the first post-surgery visit and at 6, 12, 24, 36 and 48 months after surgery.

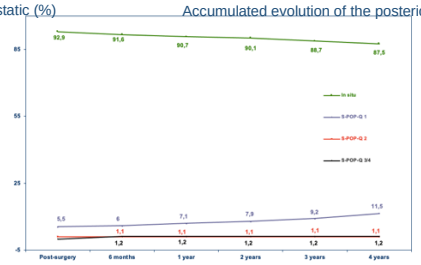
Accumulated evolution of the anterior vaginal wall static(%)



Accumulated evolution of the vaginal vault static (%)



Accumulated evolution of the posterior vaginal wallstatic (%)



CONCLUSIONS

Attaching the vaginal vault to the sacrospinous ligament poses no great technical difficulty, and allows us to tackle medium-high prolapse cases. Its efficacy obviously suffers from the expected wear of time, but preserves adequately the correction of the vaginal vault and posterior vaginal wall. However, the shift it causes to the direction of the vaginal axis makes it almost compulsory to implant a supplementary mesh under de anterior vaginal wall to avoid or, at least, minimize its subsequent relaxation.

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43 - CLINICAL HEAD TO HEAD COMPARISON OF AIR FILLED AND WATER FILLED URODYNAMICS WITH SIGNAL ANALYSIS.

Rosier P.

University Medical Center Utrecht, Department of functional urology and neurourology, Utrecht, Netherlands

INTRODUCTION AND OBJECTIVE

Earlier studies have reported differences between air filled (AF) and the standard fluid filled (FL) pressure recording systems at hallmark moments during a urodynamic study. Pressures at the start of the study, at filling sensations and or during detrusor overactive contractions or Valsalva (peak) pressures are different. 7% of the differences in intravesical or abdominal pressures are within limits of +/-10 cmH2O. Nevertheless, and especially when the differences add –up, the differences may become clinically relevant. In our prospective pairwise assessment, not only hallmark (peak) pressures as mentioned above, but all (digitally recorded) samples of the complete measurements were analysed.

MATERIAL AND METHODS

42 included patients had a simultaneous two system cystometry.(figure 1) Both pressure channels; pves and pabd and both systems; fluid (FL) and air filled (AF) have been sampled with 20Hz. Signal analysis (time shift and concordance-analysis of FL vs AF) was done after transferring the urodynamic measurements to the signal analysis software MatlabR.

RESULTS

We observed baseline differences of 3.91 cmH2O between FL and AF for the intravesical pressures with a standard deviation of 13.0 cmH2O and -3.87 cmH2O for the abdominal pressures with sd. 15.3 cmH2O. This adds –up to an average detrusor pressure difference of 6.55 cmH2O with identical sd. These difference were, although variable within the here mentioned standard deviations, observed in the remainder of the cystometry. Signal analysis was done after equalizing the initial pressures. A 99% concordance was observed between the signals per location (intravesical or intra-rectal) and a 0.0 second time difference.(figure 2) Because we observed that the highest pressures caused the largest differences we specifically analysed coughs. 68 coughs were isolated from all cystometries and analysed for peak pressures, time shift and area under the curve. The FL pressures had a higher amplitude (intravesical 58.7 vs 51cmH2O p.000 and abdominal 54.0 vs 49.4 cmH2O p.000) and shorter duration (ves: 0.28s vs 31s. & abd: 0.27s vs 0.31; both p.000). The area under the –cough pressure- curve was not different.

CONCLUSION

Based on in-depth signal analysis we confirm earlier research that fluid filled systems are systematically different from air filled systems. The baseline differences, caused by (AF) catheter-tip location and (FL) external references warrant strict adherence to guidelines and product manuals, as well as quality control especially regarding initial resting pressures. The precision and similarity of both systems after equalizing, is almost 100% in the range of pressures up to ±40-50cmH2O. Analysis of higher and fast-peak pressures during coughs, unveils that fluid filled systems respond less damped than air filled but these differences remain well within clinical limits. Air filled and water filled systems are similarly inaccurate, without quality control, and equally precise.

Figure 1

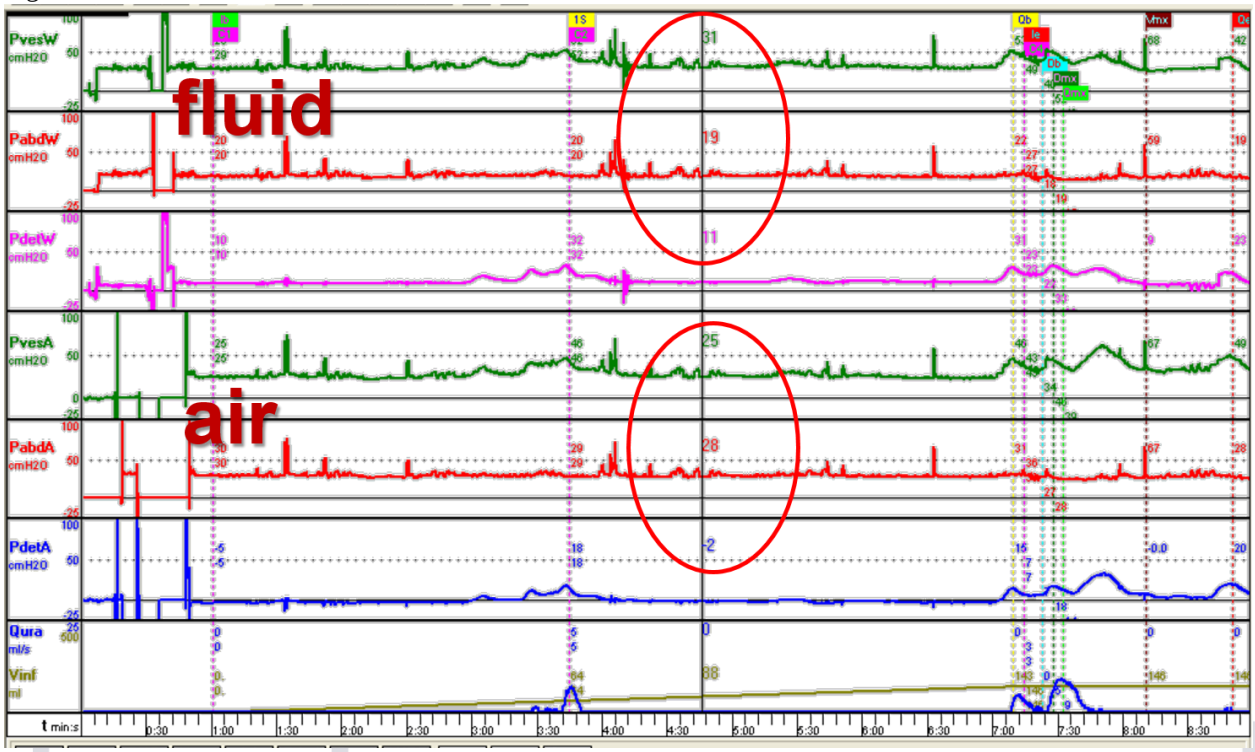
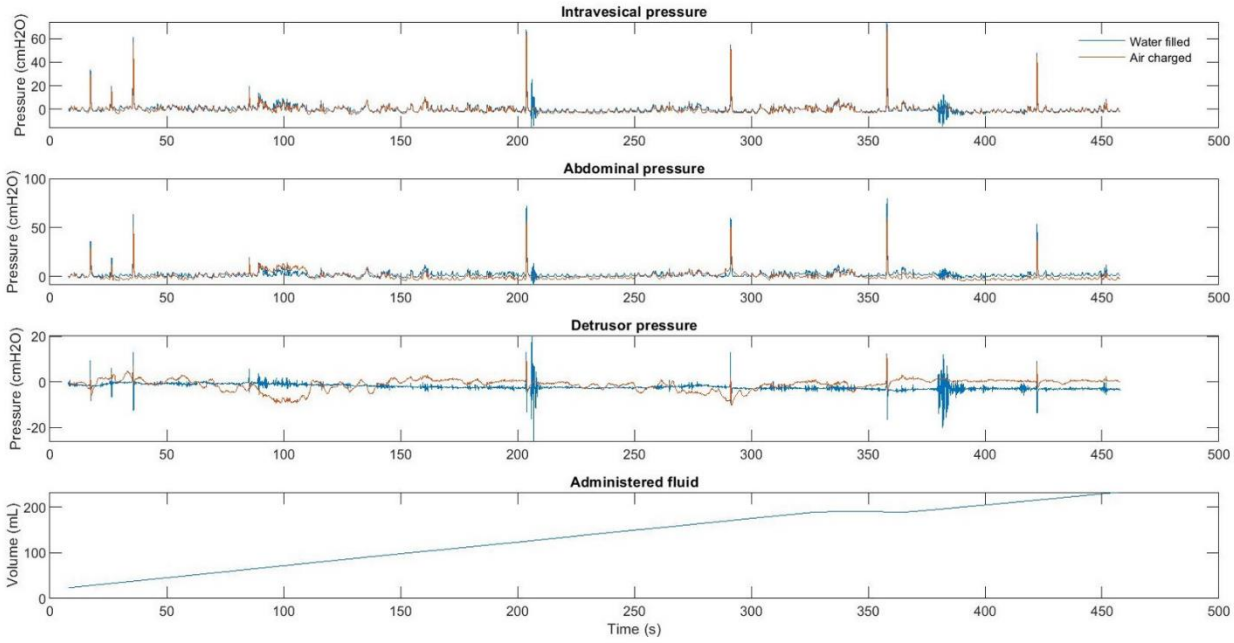


Figure 2



44 - PRESSURE FLOW STUDY RESULTS AND GRADING OF CONTRACTION IN FEMALE PATIENTS, ASSOCIATIONS WITH NOT EFFECTIVE VOIDING; DETRUSOR CONTRACTION SPEED IS MORE IMPORTANT THAN FORCE.

Rosier Peter
University Medical Center Utrecht, Department of functional urology and neurourology, Utrecht, Netherlands

INTRODUCTION

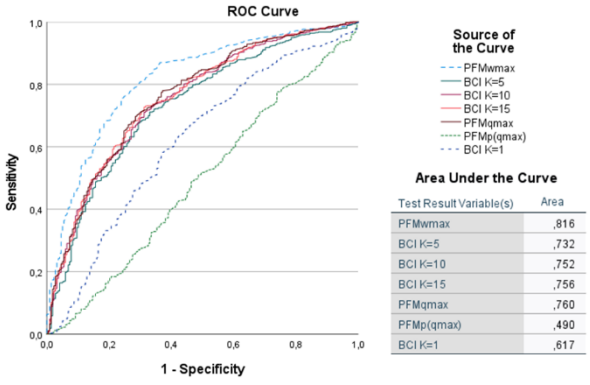
Because of the prevalence of sphincteric incontinence and storage symptoms in women, voiding analysis is underappreciated, yet critical to understanding disorders of urine storage and voiding. Clinical epidemiology of voiding parameter values in women is however scarce. We report an analysis of urodynamic pressure flow (PFS) studies in symptomatic women especially to unravel the value of parameters regarding their association with PVR or reduced voiding percentage. WF_{max} and BCI are available parameters but not well validated for female voiding. WF_{max} comprises pressure, flowrate as well as the (diminishing) intravesical volume during voiding to compute detrusor work. BCI is a simple calculation ($P_{detQmax}$ + 5*Q_{max}). A (urodynamic PFS) stop-flow test would drive the detrusor contraction to its maximum and, would -theoretically- allow an appropriate assessment, but has clinical drawbacks. A recent study has concluded that an adapted BCI (to $P_{detQmax}$ + 1*Q_{max}) has a superior association with stop-test results, compared to the original BCI.

METHODS

Retrospective review of urodynamic studies conducted in all women tested between 2010 and 2020. Analyzed studies were those for non-neurogenic dysfunction in patient able to void during standard urodynamic testing. PVR and p/Q parameters were assessed after pressure peaks and flowrate correction. Calculations included BCI and WF_{max} to assess detrusor output. BCI includes 'k' which is 5 in the usual (ICS) formula; we added k=1 (BCI k=1) but also BCI k=10 and BCI K=15 to reduce or augment the influence of flowrate in the formula. Association of these PFS (contraction) parameters and Q_{max} and $P_{detQmax}$ with PVR and Voided percentage is studied. We present ROC curves of all parameters to predict PVR >80 mL or to predict VOID% <90.

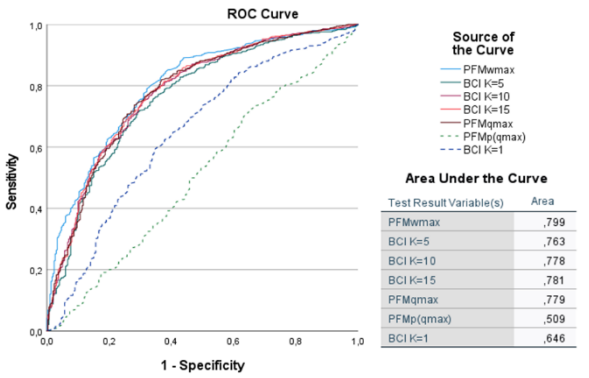
RESULTS

A total of 1260 studies were analyzed. Mean age was 50.7y (SD 17.5). Indications were: SUI 8%; UUI 13%; MUI 42%; OAB 15%; voiding symptoms 10% & other (12%). P/Q parameters were: Q_{max} 18.1 (2.5-71.7) mL/s; $P_{detQmax}$ 26.7 (-10-199) cmH2O. Detrusor underactivity was suggested in 35.6% (BCI) and 23.1% had PVR>80mL.



Area Under the Curve

Test Result Variable(s)	Area
PFMwmax	,816
BCI K=5	,732
BCI K=10	,752
BCI K=15	,756
PFMqmax	,760
PFMp(qmax)	,490
BCI K=1	,617



Area Under the Curve

Test Result Variable(s)	Area
PFMwmax	,799
BCI K=5	,763
BCI K=10	,778
BCI K=15	,781
PFMqmax	,779
PFMp(qmax)	,509
BCI K=1	,646

The ROC curves show that the indices that use Q_{max}; (PFM)Wmax; BCI k=5, or 10 or 15 and Q_{max} have a better ability to predict PVR >80mL (left hand side) or VOID% <90% (right hand side). (PFM)PdetQmax only or BCI with k-1 have a much lesser predictive value.

DISCUSSION AND CONCLUSION

The purpose of grading of detrusor contraction quality for female voiding is twofold: for objective assessment of detrusor (under)activity -if a patient has specific (underactive bladder syndrome) voiding symptoms- but secondary: for the prediction of the ability to void after intervention that potentially affects bladder outlet resistance. Velocity of contraction and dominance of flowrate in an index (WF_{max} or BCI (k=5)) would be best for the first purpose. Dominance of pressure ($P_{detQmax}$ or BCI k=1) could be superior to predict the ability to void after intervention.
We have shown the association of various contraction parameters with the ability to void effectively.

45 - ALLIUM URETERAL STENT FOR THE TREATMENT OF URETERAL STRICTURE AND FISTULA AFTER ABDOMINAL, UROLOGICAL AND GYNECOLOGICAL SURGERY

Di Marco Massimiliano, Parascani Raniero, Fraioli Alessia, Avitabile Cristina, Samplmieri Matteo, Borgoni Giuseppe

Villa Mafalda, Urology, Roma, Italy

INTRODUCTION AND AIM OF THE STUDY

Ureteral injuries are well-known complications of abdominal surgery. The aim of the study is to evaluate the safety and feasibility of Allium ureteral prothesis in patients with distal and upper ureteral injuries after abdominal surgery.

MATERIALS AND METHODS

The Allium URS is a new-developed ureteral stent made of nickel-titanium (Nitinol) meant to automatically expand when inserted in a stricture in order to restore and preserve a larger caliber. Furthermore, the stent is coated with a biochemical co-polymer which prevents tissue ingrowth and incrustations. For this study 71 consecutive patients were enrolled. All of them had an iatrogenic ureteral injury in the upper, mid and distal ureter after undergoing abdominal surgery. From these 71 patients, 21 underwent gynecologic surgery such as: emergency cesarean section (1pts 1,41 %), cesarean hysterectomy (1pts 1,41%), vaginal hysterectomy (1pts 1,41%), colposuspension abdominal hysterectomy (2pts 2,82%), laparoscopic oophorectomy (3pts 4,22%), Wertheim's hysterectomy (5pts 7,04%), laparoscopic assisted vaginal hysterectomy (8pts 11,27%). The other 50 patients underwent abdominal surgery due to: ureteral stenosis caused by retroperitoneal lymph node metastasis (3pts 4,22%), uretero-cysto-anastomosis (4pts 5,63%), pyeloureteral junction stenosis (5pts 7,04%), colectomy (6pts 8,45%), ureteral obstruction due to bladder cancer (6pts 8,45%), bladder cuff excision (8pts 11,27%), ureteral stones (18 pts 25,36%). All of them were selected for positioning the allium prothesis between January 2017 and December 2020. Ureteral leakage and stricture were diagnosed using intravenous pyelography. The etiologies were: ligation, sharp incision, transection diathermy related injuries, resection and devascularization (necrosis/stricture) of the ureter. During the procedure the stent was inserted anterogradely or retrogradely with intraoperative x-ray guidance after dilation of the stricture. The Allium URS stent was inserted into 71 ureters of 71 patients: 27 (38%) patients carried a percutaneous nephrostomy before the procedure and 44 (61%) patients had a ureteral stent.

RESULTS

While performing the procedure there were no major complications. On the other hand, during the follow up (mean 36 months) 6 obstructions (8,45%) have been reported after 8 months caused by ureteral stones all successfully treated endoscopically with holmium laser. In addition, stent migration occurred in 10 patients (14,08%) within 3 months after its insertion, of which 5 were easily replaced and the other 5 were removed with the subsequent need of a robotic re-anastomosis. Among the 5 patients affected by pyeloureteral junction stenosis, 4 needed laparoscopic pyeloplasty due to stent migration. In 20 patients the stents were removed as planned after one year of indwelling time and remained asymptomatic in a follow-up period of up to 24 months. The removal of the left 31 stents is planned during the next 12 months.

INTERPRETATION OF RESULTS

Due to its unique structure, the Allium URS is superior to the regular pigtail stents in the treatment of ureteral strictures. Stent migration was seen in 19.70% (14pts) of the patients, mainly in patients with stricture of the upper ureter.

CONCLUSIONS

The results of our study show that the use of Allium URS for the treatment of ureteral strictures is feasible, safe and effective. The relative ease of its insertion could encourage its use in a wide range of other indications. However, the results enlighten that the use of Allium URS stent should not be recommended to treat pyeloureteral junction stenosis because of its high risk of migration.

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46 - PELVIC ORGAN PROLAPSE SURGERY (POPS) PROCEDURE FOR THE TREATMENT OF MODERATE PELVIC ORGAN PROLAPSE (POP)

Di Marco Massimiliano, Sampalmieri Matteo, Avitabile Cristina, Fraioli Alessia, Parascani Raniero, Borgoni Giuseppe

Villa Mafalda, Urology, Roma, Italy

INTRODUCTION AND AIM OF THE STUDY

More than 41% of women who present to uro gynecological evaluation have underlying pelvic organ prolapse (POP). In case of a need for surgical correction a number of techniques have been adopted using different approaches. Here in we report our experience in laparoscopic treatment of POP.

MATERIALS AND METHODS

In the last 2 years 84 women aged 33 to 86 year (average 60) underwent laparoscopic correction of symptomatic POP using POPS procedure in our Department. Prolapse involved the anterior compartment in 62 pts (73,2%) and the apical compartment in 22 pts (26,8%). Low grade rectocele was evident in 6 (7%) pts. 18 pts had been previously submitted to simple hysterectomy. Dominating symptoms were vaginal bulge and heaviness and dyspareunia; urinary stress-urge incontinence coexisted in 34 pts (54%) in first group and 20 pts (90%) in second group. All patients were submitted to pad test. Basic evaluation included POP staging according to Baden-Walker halfway scoring system urodynamic study Q- tip test and sonography. 36 pts underwent complementary MRI (42%) study 15 of first group and 21 of second group. QoL questionnaire was administered to all cases before surgery and 6 months after.

RESULTS

POP of anterior compartment were classified as grade1 in 62pts (73,2%) first group and grade 2 in 22 pts(26,8%). POPS was performed using 4 laparoscopic ports lasted 40 to110 min (average75) and was uneventful in all cases. Prothesis macroporous light weight in polypropylene InGyne IGPROPDL Dipromed -Italy™ was anchored to the anterior fornix of vagina with a running suture and extracted medially to the anterior iliac spine through a subperitoneal route. Preliminary hysterectomy was considered necessary or advisable in 8pts (9,5%). Pts were discharged after an average of 2,5 days During follow up which averaged 12 months (3to 9) POPS was anatomically successful (POP downstaging or correction) in 80 cases (95 %) which corrisponded to a symptomatic resolution in 78 cases (92%). Average pad test was 2,9 (1to4) in the first group and 3,1 (2-5) in second group preoperatively and 0,02 (0 to2) in the first group and 0,45 (0-1) after surgery. De novo incontinence was evident in 2 cases of second group which were treated conservatively. Mesh erosion in the vagina became evident after 3 months in 1pts (1,2%) and required surgery. 4 pts of second group had dislocation of mesh (2 of theme required surgery to relocate and 2 did not accepted a new operation). IQoL questionnaire score was statistically improved at the 3 month control: in the first group preoperatively 47 (min 26 max 80 and postoperatively 97 (min 55 max 110). In the second group preoperatively 39 (min 35 max 60) and postoperatively 97 (min 82 max 105)

CONCLUSIONS

According to our experiece POPS procedure appears to be at middle term control a feasible option in case of low-moderate POP due to its efficiency semplicity and low invasiveness. Erosion of mesh is a rare complication which however needs to be checked in the long term in agreement with the just renewed FDA warning.

Key words: Pelvic organ prolapse, POPS procedure, Urinary incontinence, Mesh erosion, Urethral hypermobility

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47 - QUALITY OF THE LIFE IMPACT OF A LIGHT THERAPY WITH D_MANNOSE, SALICYLATE, SALICIN AND LACTOBACILLUS ACIDOPHILUS IN FEMALE PATIENTS WITH URETERAL STENT AFTER NEPHROLITHOTRIPSY: A RANDOMIZED STUDY

Di Marco Massimiliano, Fraioli Alessia, Parascani Raniero, Avitabile Cristina, Sampalmieri Matteo, Borgoni Giuseppe

Villa Mafalda, Urology, Roma, Italy

INTRODUCTION AND AIM OF THE STUDY

During ureteroscopy for urolithiasis, postoperative ureteral drainage with double J stent is frequently used. It may reduce acute postoperative pain and late ureteral stenosis. Double J stent can have negative impact on quality of life.
Post operative pain, urgency and urge incontinence, hematuria, problems in sexual intercourse and in work performance are the common adverse symptoms.

MATERIALS AND METHODS

We involved in our study 42 female patients age 29 and 78 years (mean 47,33) underwent laser lithotripsy for kidney stones with insertion of double J stents.
Inclusion criteria were patients without preoperative LUTS , renal stones patients
Exclusion criteria were patients with ureteral stones (to exclude irritative symptoms coming from basic pathology) ,patients with neurogenic diseases.
We submitted to all patients preoperatively and post operatively OAB- q SF (overactive bladder) questionnaire.
This questionnaire evaluates irritative lower urinary tract symptoms , social discomfort and sexual intercourse.
The questionnaire is composed of 13 questions , scale 1 to 6 for each question (total minimum score is 13 ,total maximum score is 78) concerning quality of life regarding urgency, urge incontinence, pain, work performance and sexual satisfaction. 42 patients were divided in two arms (A) and (B), 21 patients for each arm.Arm (A) patients were exposed to medical therapy after ureteral stenting positioning with 3000 mg of D_ mannose + 600 mg of dry extract of salicylate + 90 mg of salicin once a day for 7 days and then 1400 mg of D_ mannose + 2 billions CFU of lactobacillus acidophilus for 21 days before ureteral stent removal. No medical therapy was given to (B) arm.At the end of the study patients of (A) arm and(B) arm were randomized (1,2,3,5,8,9,12,14,17,18,24,27,28,30,31,34,35,36,38,40,41 received therapy) Randomized results showed a medium preoperative OAB-q SF questionnaire score of 14,2 (min 13,max 20) in group (A) whereas a medium preoperative OAB-q SF questionnaire score of 13,7 (min13, max 20) in group (B).

RESULTS

Randomized results showed a medium postoperative OAB qSF questionnaire score of 32,6 (min 26, max 41) in group (A) whereas a medium postoperative OAB qSF questionnaire score of 47,04 (min 36, max 61) in group (B).
Randomized results showed a medium postoperative OAB qSF questionnaire score of 32,6 (min 26, max 41) in group (A) whereas a medium postoperative OAB qSF questionnaire score of 47,04 (min 36, max 61) in group (B).

CONCLUSIONS

In conclusion, the study showed that combination of D_mannose + salicylate + salicin therapy immediately post nephrolithotripsy with ureteral stent in situ and a combination of D_ mannose + lactobacillus acidofilus before the ureteral stent removal significantly reduced the post operative bothersome symptoms in patients underwent nephrolitotripsy for renal stones and ureteral stent positioning provided that the patient does not take any other medical therapy.

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48 - THE IMPACT OF SURGEON EXPERIENCE ON THE OUTCOMES OF OASIS REPAIR

Scancarello Chiara, De Rosa Andrea, Cimmino Chiara, Braga Andrea, Grampa Manuela, Mattioli Giulia, Ghezzi Fabio, Gubbiotti Marilena, Serati Maurizio

Dipartimento Ginecologia e Ostetricia, Ospedale regionale Mendrisio, Mendrisio, Switzerland, Dipartimento Urologia, Ospedale San Donato, Arezzo, Italy, Università dell'Insubria, Ospedale Filippo del Ponte, Varese, Italy

INTRODUCTION AND AIM OF THE STUDY

An estimated 4% to 6.6% of women delivering vaginally sustain obstetrical anal sphincter injuries (OASIS).
Perineal tears can be classified, according to RCOG classification, into four degrees: 1st degree is injury to perineal skin and/or vaginal mucosa only; 2nd degree is injury to perineal muscles but not involving the anal sphincter; 3rd degree is injury to perineum involving anal sphincter complex: IIIA less than 50% of EAS (external anal sphincter) thickness torn, IIIB more than 50% of EAS thickness torn and IIIC both EAS and IAS (internal anal sphincter) torn; 4th degree injury involving anal sphincter complex (IAS and EAS) and anal epithelium. [1]
OASIS can have a significant impact on women's quality of life, due to complications in the short and long term (perineal pain, abscess, rectovaginal fistula, wound breakdown and anorectal symptoms). OASIS are the most common cause of anal incontinence in otherwise healthy women. After primary repair of OASIS the reported rates of anal incontinence range between 15 and 61%, this high prevalence underline the need of optimal surgical techniques and post-operative management. [1]
The aim of this study is to evaluate different outcomes in terms of pelvic floor dysfunction (urge and stress urinary incontinence, gas leakage, faecal incontinence and dyspareunia) in patients with OASIS repaired by a highly trained urogynaecologist versus gynaecologists without specific training in this issue.

MATERIALS AND METHODS

This was an observational analytical prospective cohort study performed in a single Urogynaecological Unit between January 2019 and December 2020. We included all women who have had anal sphincter injury according to RCOG classification. Exclusion criteria were: previous history of faecal incontinence, urinary incontinence and gas leakage. The screening visit, six weeks after labour, was designed as visit 0. At this visit, patients underwent medical history collection (demographic data, symptoms of the lower urinary tract, faecal incontinence, gas leakage and dyspareunia), physical examination and pelvic ultrasonography. Each patient was asked to record the symptoms degree of bother by visual analogue scale (VAS) with a score from 0 to 10. All women who have had anal sphincter injury were directed to pelvic floor rehabilitation.

RESULTS

During the study period, 116 women met the inclusion criteria and were included in our study. We divided patients into 2 groups: group 1 were the patients (25) sutured by an urogynaecologist with a specific training and group 2 were the patients (91) sutured by a gynaecologist without specific training in this issue. The characteristics of the 2 groups are described in Tab. 1. In Tab. 2 we resume the degree of tears: in group 1 there are 21 severe tears (≥ IIIC degree) while in group 2 there are 16 severe tears, with a p-value < 0,02. In group 2 we had 4 complications that need reintervention: 1 patient underwent sphincterotomy, 1 patient underwent a second intervention for a rectovaginal fistula and 2 patients were re-sutured few days after the first suture for wound dehiscence. While in group 1 no reintervention was necessary.
Analyzing patient's symptoms we found that only 1 patient of group 1 (1/25, 4%), repaired for a IV degree tear, was symptomatic and complained of soiling while 75 patients in group 2 (75/91, 41,5%) were symptomatic for pelvic floor dysfunction after surgical repair. In Tab. 3 we described the symptoms reported at the first visit: 4/76 (18,4%) had urge urinary incontinence; 13/76 (17,1 %) stress urinary incontinence; 23/76 (30,2 %) gas leakage; 10/76 (13,1 %) faecal incontinence; 1/76 (1,3%) soiling and 15/76 (19,7 %) dyspareunia.

INTERPRETATION OF RESULTS

Our results showed that there is a positive correlation between the training of the gynaecologist and the low rate of complications and pelvic floor dysfunctions, such as urge urinary incontinence, stress urinary incontinence, faecal incontinence and gas leakage after labour complicated by OASIS. There was a single adverse outcome in the group of patients with OASIS repaired by a trained urogynaecologist: the patient had a 4th degree tear and, 6 weeks after labour, complained of soiling, that was successfully cured with a program of pelvic muscle floor training. Our findings highlight the importance of adequate reconstruction of anal sphincter injury during primary repair.

CONCLUSIONS

A non-optimal repair of perineal tears can compromise the women's quality of life in terms of urinary and anal incontinence symptoms and dyspaurenia. We should minimize the risks of OASIS and, at the same time, we should focus on training to recognize severe perineal tears.
Optimal repair of tears should be a high clinical priority and the surgical skills are the basics for optimal repair.

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Table 4

Characteristics	Group 1 (n° 25)	Group 2 (n° 91)	p value
Median age	31 (21-44)	32 (20-45)	0.74
Nulliparous	21 (84%)	69 (75.8%)	1.0
BMI	25.7 (22.6-29.1)	26.5 (24.8-29.4)	0.46
Previous anal sphincter injury Birth weight Operative labour with vacuum extraction	1 (4%) 3300 (3130-3695) 8 (32%)	2 (2.2%) 3500 (3120-3730) 17 (18.6%)	1.0 0.57 0.99
Epidural analgesia Mediolateral episiotomy Duration II stage Severe OASIS Pelvic floor dysfunction after OASIS	13 (52%) 10 (40%) 73.5 (32.5-121.5) 21 (84%) 1(4%)	46 (50.5%) 30 (32.9%) 88 (47.5-164) 16 (32.1%) 75 (82.4%)	1.0 1.0 0.41 0.02 <0.0001
Re-interventions	0 (0%)	4 (4.3%)	0.99

	Group 1 (n° 25)	Group 2 (n° 91)
III A	1	39
III B	3	36
III C	16	10
IV	5	6

Table 5
Table 3

Symptoms	76 patients	VAS
Urge urinary incontinence	14	6
Stress urinary incontinence	13	4.5
Gas leakage	23	6
Faecal incontinence	10	7
Soiling	1	3
Pain/dyspareunia	15	7

49 - PREVENTION OF PELVIC FLOOR DYSFUNCTIONS IN WOMEN WITH PREVIOUS OPERATIVE VAGINAL DELIVERY AND SEVERE PERINEAL LACERATIONS

Felici Gessica, Papa Gaetano, Gentili Chiara, Grechi Gianluca

Hospital Carlo Urbani (Jesi) And University Hospital Policlinico Casula (Cagliari), Hospital Carlo Urbani (Jesi), Jesi (An), Italy, Hospital Carlo Urbani (Jesi), Hospital Carlo Urbani (Jesi), Jesi (An), Italy, Hospital Carlo Urbani Jesi, Hospital Carlo Urbani (Jesi) And University Hospital Policlinico Casula (Cagliari), Jesi(Ancona), Italy, Hospital Carlourbani, Hospital Carlo Urbani (Jesi), Jesi (An), Italy

INTRODUCTION:
The use of a vaginal pessary to treat a pelvic organ prolapse (POP) is a valid non-invasive option. Severe complications are very rare and usually associated with neglected, oversized or misplaced pessaries. Major complications include fistulas, bowel or bladder erosion and hydroureteronephrosis. The most common complications are vaginitis and urinary tract infections.

OBJECTIVES:
The aim of this study is to highlight any differences in the incidence of vaginitis and urinary tract infections in patients undergoing prophylactic antibiotic therapy and those who are not receiving treatment after 6 and 12 months from pessary placement for pelvic organ prolapse.

METHODS:
A retrospective study based on the analysis of the our uroginaecologic database has been undertaken from December 2016 to December 2018.
We compare two homogeneous groups of patients with pessary: GROUP A: patients not undergoing prophylactic antibiotic therapy after pessary placement. GROUP B: Patients undergoing prophylactic antibiotic therapy (vaginal metronidazolo and clotrimazolo once a week) after pessary placement.
We used flow charts to take an accurate medical history of each patient. Blood and urine analyses were taken at admission to assess the potential presence of renal failure and urinary tract infection. Physical examination included vaginal examination. A follow-up visit 2 weeks after placement was planned and patients were instructed to return to the clinic if they had any complaints or if they lost the pessary. If the patients was satisfied with the pessary, follow-up visits every 6 months were planned for pessary cleaning and vaginal inspection. When a urinary tract infection is suspected it is mandatory to administer antibiotic therapy.

RESULTS:
Infection rate in GROUP A : 38%, infection rate in GROUP B : 9%.

CONCLUSIONS:
We found clear evidence that prophylactic antibiotic therapy were associated with clinically meaningful reductions in adverse effects such as vaginitis and urinary tract infection. There is no uniform management of women with pessary. For this reason, and based on the literature and our experience, we propose an original management flowchart. The main goal of preventive strategy is to reduce the rate of adverse events while improving women's outcomes following pessary for prolapse. A broad spectrum of perioperative interventions are available and although the benefits of prophylactic antibiotic therapy after pessary placement are well established.

KEY WORDS:
pessary, prophylactic antibiotic therapy, urinary tract infection

50 - VAGINAL HYSTERECTOMY WITH SUTURELESS TECHNIQUE IN PELVIC FLOOR RECONSTRUCTIVE SURGERY

Felici Gessica, Papa Gaetano, Gentili Chiara, Grechi Gianluca

Hospital Carlo Urbani Jesi, Hospital Carlo Urbani (Jesi), Jesi (An), Italy, Hospital Carlo Urbani (Jesi), Hospital Carlo Urbani (Jesi), Jesi (An), Italy, Hospital Carlo Urbani Jesi, Hospital Carlo Urbani (Jesi) And University Hospital Policlinico Casula (Cagliari), Jesi (An), Italy, Hospital Carlourbani, Hospital Carlo Urbani (Jesi), Jesi (An), Italy

OBIECTIVES:
The aim of this study is to compare outcomes of vaginal hysterectomy for POP performed with conventional suture ligation technique versus the one performed with Bipolar Vessel Sealing System (ENSEAL X-one Johnson & Johnson).

METHODS:
Randomised controlled trial of benign vaginal hysterectomies between January 2016 and January 2019. Eligible patients (210) were divided in two groups. Group “standard”(100 patients) and Group “sutureless” (110 patients). Outcomes analized included: bloodloss (determined by haemoglobin drop between pre-operative and post-operative values), post-operative pain (determined by analgesia consumption during post-operative hospital admission, as an average dose per day and determined by the Numerical Rate Scale), operative time, length of hospital stay, long term result (all patient underwent gynaecological examination one mounth and six mounth after surgery.

RESULTS:
By our experince we can say that Electrosurgical bipolar vessel sealing can provide a safe and feasible alternative to sutures in vaginal hysterectomy, resulting in:
- minimal blood loss : medium ΔHb:1,8 (g/dL) in “standard Group” vs medium ΔHb:1,2 (g/dL) in “sutureless Group”;
- less post-operative pain: medium NRS score: 5 in “standard Group” vs medium NRT 3 in “sutureless Group”;
- reduced operative time (and reduced anestesiological risks): medium 47 minutes in “standard Group” vs medium 32 minutes in “sutureless Group”;
- length of hospital stay : 70 h in “standard Group” vs 52 h in “sutureless Group”;
- better objectable results with bimanual visit during the gynaecological examination one mounth and six mounth after surgery.

CONCLUSIONS:
BVSS is an haemostatic control device that can seal blood vessels up to 7 mm in diameter by denaturino collagen and elastin within the vessel wall and in the surrounding connective tissue. Replacing conventional suture ligation technique with a single surgical gesture we can obtain a true synthesis of blood/lymphatic vessels and portions of tissue and radio frequency hand-cutting with a minimal thermal spread and consequently without tissue necrosis and minimal bleeding in thick tissue. It’sa system that uses the combination of Pressure and Radio Frequency and the result is that the tissue merge to recompose in a stronger and more durable new-formed tissue. Last but not the least we have a retraction effect of the tissues which determines a better suspension of the vaginal cuff to the stumps of the uterus-sacral ligaments made more "resistant" by the fusion of the“new tissues”. Our experience confirms that the bipolar vessel sealing (ENSEAL X-one) can offer an effective and efficient alternative to suture ligation in vaginal hysterectomy for POP with significant improvement in patients outcome. Its use contributes to the advancement of minimally invasive gynaecology and should be encouraged. It should be choose as the preferred mode of hysterectomy whenever possible.

KEY WORDS:
vaginal hysterectomy, sutureless surgery, bipolar vessel sealing system, pop.

51 - VAGINAL PESSARY USE IN POP: IS PROPHYLACTIC ANTIBIOTIC THERAPY MANDATORY?

Felici Gessica, Accogli Katia, Papa Gaetano, Gentili Chiara, Grechi Gianluca

Hospital Civitanova Marche, Hospital Civitanova Marche, Civitanova Marche, Italy, Hospital Carlo Urbani (Jesi), Hospital Carlo Urbani (Jesi), Jesi (An), Italy, Hospital Carlo Urbani Jesi, Hospital Carlo Urbani (Jesi) And University Hospital Policlinico Casula (Cagliari), Jesi (An), Italy, Hospital Carlourbani, Hospital Carlo Urbani (Jesi), Jesi (An), Italy

INTRODUCTION:
The use of a vaginal pessary to treat a pelvic organ prolapse (POP) is a valid non-invasive option. Severe complications are very rare and usually associated with neglected, oversized or misplaced pessaries. Major complications include fistulas, bowel or bladder erosion and hydroureteronephrosis. The most common complications are vaginitis and urinary tract infections.

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CONCLUSIONS:
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KEY WORDS:
pessary, prophylactic antibiotic therapy, urinary tract infection.

52 - THE DECLINE OF VAGINAL HYSTERECTOMY IN A LARGE TEACHING HOSPITAL

Ward Rebecca, Rogerson Lynne

Leeds Teaching Hospitals, Leeds Teaching Hospitals, Leeds, United Kingdom

INTRODUCTION AND AIM OF THE STUDY

Hysterectomy is a common gynaecological procedure carried out via three routes, vaginal (VH), abdominal (AH) and laparoscopic (LH) for varying indications. The introduction of the laparoscopic hysterectomy as a less invasive approach to reduce hospital stay and post-operative recovery sparked comparison between hysterectomy routes. Our aim was to analyse trends in hysterectomy route for benign indications over a 10-year period in a large, UK teaching hospital and determine if more hysterectomies could have been carried out vaginally.

MATERIALS AND METHODS

A retrospective, cohort study of 8457 women coded as 'hysterectomy' between 2008 and 2018 in Leeds Teaching Hospitals Trust (LTHT).

RESULTS

Over the 10-year study period, there were 1511 vaginal, 1547 abdominal and 410 laparoscopic hysterectomies carried out for benign indications. Numbers of hysterectomy are declining from 360 in 2008 to 157 in 2018. In 2008, there were 185 vaginal, 172 abdominal and 3 laparoscopic hysterectomies performed compared with 38, 77 and 42 respectively in 2018. The commonest indications for LH were heavy menstrual bleeding and dysmenorrhoea, which remained constant over the study period and the average hospital stay reduced from 2 to 1 night. In 2018, 23% of laparoscopic hysterectomies had no contra-indications to the vaginal route compared with none in 2008.

INTERPRETATION OF RESULTS

Fewer hysterectomies are being performed for benign indications compared with 10 years ago with the advent of endometrial ablation and the Mirena intrauterine system. Despite the introduction of laparoscopic hysterectomy to reduce the number of laparotomies, in Leeds it has also reduced the number of vaginal hysterectomies.

CONCLUSIONS

Route of hysterectomy is changing with a significant decrease in vaginal hysterectomy, gradual decline in abdominal hysterectomy and a large increase in laparoscopic hysterectomy. In recent years, a growing number of hysterectomies were performed laparoscopically; the question is should they have been performed vaginally? Are we making a skilled, cheap operation very expensive?

53 - OBESITY AS A PROTECTIVE FACTOR FOR MESH EXPOSURE AFTER MIDURETHRAL SYNTHETIC SLINGS (MUS) OPERATION: LONG TERM FOLLOW-UP

Daykan Yair, Schonman Ron, Eliner Or, Tamir Yaniv Rina, Belkin Shir, Ribak Rachel, Arbib Nissim, Klein Zvi

The department of Obstetrics & Gynecology,Meir Medical Center, Kfar Saba, Sackler School of Medicine, Tel Aviv University, Tel Aviv, Israel

INTRODUCTION AND AIM OF THE STUDY

Obesity is steadily increasing, with 50% of American women suffering from this condition, and it has nearly tripled since 1975[1]. Obesity is a known independent risk factor for stress urinary incontinence (SUI).[5] Wound complications, including mesh exposure, remain an essential issue for morbidity after MUS operation and can considerably cost the patient and the health care system. [30]. Estrogen deficiency occurring after menopause is known to cause atrophic changes within the urogenital tract. This retrospective study aimed to answer whether obesity is a protective factor for mesh exposure.

MATERIALS AND METHODS

A retrospective cohort was conducted. Data were retrieved from hospital electronic medical records (EMR) from April 2014 through April 2021 in a tertiary university hospital. The cohort included patients after a Midurethral synthetic slings (MUS) surgery for SUI, including TVT-O (Gynecare, Ethicon), TVT-Abbrevo (Gynecare Ethicon), and Retro-pubic TVT-Exact (Gynecare, Ethicon). The cohort was divided into two groups. The study group included obese patients (BMI greater than or equal to 30 kg/m2). The control group was paired with a BMI of less than 30 kg/m2. Demographic data, pre-operative, intraoperative, and postoperative findings, were obtained from EMR.

RESULTS

Out of *292* patients who had MUS surgery, *120*(*41*%) obese patients were paired with *172*(*59*%) non-obese patients. *265*(*90.*7%) of the cohort patients underwent tension-free vaginal tape-obturator (TVT-O), 15(5.1%) mini-sling TVT, and 12(4.1%) Retro-pubic TVT. Diabetes Miletus was significantly more prevalent in the study group(p=.01) with no other demographic differences. The Mesh exposure rate was 5.4% during the study period. The obese group had a significantly lower incidence of postoperative mesh exposure 1.6% (2/120) vs. 8.1% (14/172) p=.007). The mean follow-up was 49.9 vs. 51.5 months (p=.548). The level of POP, cystocele and rectocele were significantly higher in the non-obese patients. Non-obese patients had a higher frequency of hormone replacement therapy (HRT) use during surgery (p=.004). No significant differences between groups in menopause status.

INTERPRETATION OF RESULTS

Obesity is a protective factor for mesh exposure and may be related to patients' estrogen and fat cells levels.

CONCLUSIONS

Long-term follow-up after TVT surgery showed an association between obesity and decreased mesh exposure rate. Further research is required to demonstrate the correlation between estrogen treatment and mesh exposure.

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54 - A NOVEL TECHNIQUE FOR THE MEASUREMENT OF CERVICAL LENGTH IN NON-PREGNANT WOMEN

Vinnikov Yana, Levy Gil, Barzilay Eran

Mayanei Hayeshua medical center, Department of Obstetrics and Gynecology, Bnei Brak, Israel, Samson Assuta Ashdod Hospital, Department of Obstetrics and Gynecology, Ashdod, Israel

INTRODUCTION AND AIM OF THE STUDY

Cervical elongation (CE) is a condition that correlates closely with pelvic organ prolapse (POP). With an increasing trend towards uterine sparing procedures it is important to diagnose and address CE ,as it has been found to be a risk factor for post-surgical POP recurrence. Although CE has been the subject of many previous studies, and with the understanding of its importance, we haven't been able to find a consensus in the literature regarding the definition of CE nor on what comprises a normal cervical length in the non – pregnant woman. Furthermore, studies of CE have varied in their choice of population, reason for treatment, measuring modality (clinical and imaging) and technique.

Many of the studies trying to asses CE by ultrasound (US) have found lack of correlation to pathological measurements of hysterectomy specimens, partly due to variations in parts of the cervix being measured. The primary objective of this study was to evaluate a new technique for sonographic measurement of cervical length, using the uterine artery as an anatomical marker. In addition, we wanted to try and determine the pitfalls of various different measuring techniques as well as evaluate normal cervical lengths in our study population.

MATERIALS AND METHODS

This was a prospective study, in which we enrolled women undergoing hysterectomy. Women with cervical tumors or a history of cervical operations were excluded from the study. Cervical lengths were measured both by US and anatomical measurement. Prior to surgery we measured the cervical length using two methods; the external length of the cervix was measured using Doppler location of the uterine artery near the cervico-uterine junction as the proximal point, and the US measurement of the cervical canal. Following hysterectomy, we recorded the measurements of the cervical canal, the external cervix and the uterine corpus length on all uterine specimens. All measurements were obtained in the operating theatre prior to placement in formalin. Baseline characteristics as age, BMI and POP-Q were also collected

RESULTS

20 women were eligible for evaluation. The average anatomical cervical canal length was (ccAN) 33.95 mm (±9.23 SD) and the average length by external measurement (ceAN) was 36.80mm (±7.54 SD). We found a statistically significant ($p< 0.01$), high-powered correlation between our US and anatomical measurements of the cervix in both techniques rp = 0.752-0.868 (Table 1). Similar correlation was found between the two US techniques with power of 0.943. There was a negative correlation between cervical length and women's age (rp= -0.443,p=0.05).

Due to a small cohort, we were unable to establish correlation with BMI, parity and POP-Q measurements.

INTERPRETATION OF RESULTS

The significant, high powered correlation, between the US and anatomical measurements suggests US is still a useful tool in evaluating CE in the non-pregnant women. Likewise, the high correlation between the different measuring techniques demonstrates the importance of standardizing the parts being measured.

CONCLUSIONS

Transvaginal ultrasound measurement of cervical length using the uterine artery as a marker was found to have strong correlation to the anatomical cervical length and can be used for the measurement of normal cervical length in the non-pregnant population.

Table 1

Correlation between cervical canal, external cervix and uterine corpus lengths, measured by US and pathology (Pearson test). ***p< 0.01**

	Cervical canal US - ccUS	**Cervical canal anatomical - ccAN**	**Cervix external US - ceUS**	**Cervix external anatomical - ceAN**	**Uterine corpus US - cuUS**	**Uterine corpus anatomical - cuAN**
Cervical canal US - ccUS		*.868***	*.943***	*.830***	*.152*	*.132*
Cervical canal anatomical-ccAN	*.868***		*.755***	*.855***	*.300*	*.274*
Cervix external US - ceUS	*.943***	*.755***		*.752***	*.125*	*.117*
Cervix external anatomical - ceAN	*.830***	*.855***	*.752***		*.035*	*.049*
Uterine corpus US - cuUS	.152	*.300*	.125	*.035*		*.985***
Uterine corpus anatomical - cuAN	*.132*	*.274*	.117	*.049*	*.985***	

55 - UTERO-VAGINAL PROLAPSE RECONSTRUCTION BY UTEROSACRAL LIGAMENT STRENGTHENING WITH ANTERIOR TRANSOBTURATOR TAPES - A VAGINAL APPROACH

Lužnik Marijan, Lužnik Jan

General Hospital Slovenj Gradec, Department of Gynecology and Obstetrics, Slovenj Gradec, Slovenia, University Medical Centre Maribor, University Medical Centre Maribor, Maribor, Slovenia

INTRODUCTION AND AIM OF THE STUDY

The paired uterosacral ligaments are the centre of numerous pathophysiological considerations, most notably in relation to chronic pelvic pain syndrome (CPPS) and pelvic floor dysfunction (PFD) due to pelvic organ prolapse (POP) (1-2). We wanted to evaluate efficacy and safety of apical and anterior vaginal prolapse repair using self-tailored tape implants by uterosacral ligament strengthening with vaginal surgical approach.

MATERIALS AND METHODS

Based on our extensive surgical experience with 600 vaginal procedures using individually cut mesh-implants, performed between 2000 and 2016, for correction of POP, we developed the uterosacral ligament augmentation (USLA) with anterior transobturator tapes (ATOTs) method. The Slovenian National Medical Ethics Committee approval was obtained. Between January 2017 and March 2021, 70 corrections of apical and anterior vaginal prolapse stage II-IV by ICS system (median age 61 years [38-80 years]) were performed with ATOTs and USLA by the same experienced surgeon. The preoperative vaginal status was assessed as stage II-IV by the ICS system. Non-absorbable polypropylenes mesh (60 g/m2) 10 cm x 15 cm was used to individually design tape implant (Figure 1). Two pairs of tapes were inserted transobturatorly (under urethra and bladder neck) through 1 dermal incision on each side (Figure 2). Two apical tapes for USLA had been individually moved laterally into the vesicovaginal space before being inserted completely tension free in the direction of both uterosacral ligaments (out of the penetration line during sexual intercourse) (Figure 3). ATOTs with USLA were used with or without vaginal hysterectomy (55 and 9 cases, respectively). In 6 cases ATOTs with USLA were used for correction of vaginal cuff prolapse (Table 1). The postoperative ICS stage was assessed on day 5, 3 months and 12 months after surgery. Urine, fecal continence, and sexual function were evaluated using a questionnaire 12 months postoperatively.

RESULTS

All patients had an ICS stage zero on postoperative day 5 and 3 months after surgery. 63 out of 70 patients (90%) have already completed 1 year follow up and remained ICS stage zero, without any pelvic pain. During the first year of follow up, no serious complications were observed. In 5 cases (7%), postoperative complications were observed (3 implant material exposures and 2 patients developed de-novo overactive bladder (OAB) symptoms with borderline urine retention). A small denuded tape part was excised under local anaesthesia and left open to heal spontaneously (no vaginal sutures were used) in all three cases. The OAB symptoms and urine retention was successfully managed by mechanically cutting the suburethral tape. After the procedure, the symptoms of urinary incontinence did not recur in neither of the two cases.

INTERPRETATION OF RESULTS

In contrast to other currently used methods for the treatment of pelvic organ prolapse where the apical tapes are attached directly, around or through the sacrospinal ligament, reconstruction of the vagina and strengthening of the uterosacral ligaments (1-2) with ATOTs is performed by completely tension-free insertion of two apical tapes in the direction of both uterosacral ligaments. Therefore, during sexual intercourse, tape implants remain far away from the sacrospinal ligaments (outside the penetration line during sexual intercourse), which not only successfully reduces the risk of postoperative dyspareunia, but also reduces the rate of other postoperative complications (for example extrusion of tape material) to rate of TVT-O procedures. The aesthetic advantage of the procedure is provided by one skin incision or a stab wound hidden in the femoral-genital folds on the left and right. Both pairs of transobturator tapes are inserted separately through the same skin incision on the right and left sides, and then are completely separated by a tissue septum, until colpotomy opening under the urethra and under the bladder neck (Fig. 2, 3). It is important that the suburethral and subvesical part of two anterior tapes remain in the medial part connected. This connection is covered by the vaginal wall, which was not interrupted at the anterior colpotomy performed with two incisions. Therefore, the suburethral and subvesical portions of both anterior tapes retain the shape of the tape, and cannot be twisted into a cord until they pass through the inner transobturator membrane and muscle. This provides excellent support to the urethra and eliminates the risk of postoperative stress urinary incontinence in cases of occult urethral insufficiency (3). Transobturator tapes connect both tendon arches and serve as a good anchor for apical tapes that run individually laterally in the paravesical space before being inserted loosely upward, parallel to the uterosacral ligaments (Fig. 2, 3). Vaginal reconstruction by strengthening the sacrouterine ligaments can also be successfully used to support the pelvic organs in the case of a lateral defect to the pubocervical fascia and in the case of damage to the apical cardinal and uterosacral ligaments. Reinforcement of level 1

with simultaneous obliteration of cavum Douglasi and excision of redundant peritoneum is a good prevention against enterocele. Simultaneous reconstruction of abnormalities on level 2 and 3 with classical colpoperineoplasty and rectorrhaphy is rarely necessary to be used to restore the natural anatomy.

CONCLUSIONS

Apical and anterior vaginal prolapse repair with self-tailored ATOTs and USLA is safe and offers excellent short-term anatomical and functional results.

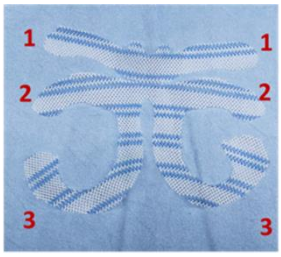

Figure 1. Individually design tape implants.

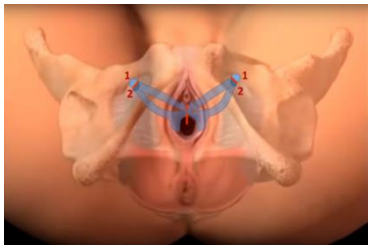

Figure 2. Two pairs of tapes were inserted transobturatorly

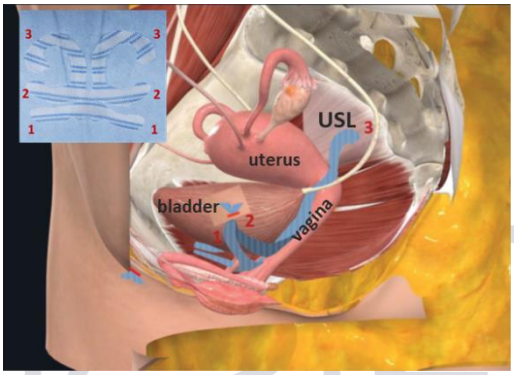

Figure 3. Left apical tape (3) in lateral vesicovaginal space and inserted in the direction of left uterosacral ligament

Table 1. The number of ATOTs + USLA performed for POP correction.

	Vaginal cuff prolapse	Without hysterectomy	With hysterectomy	Together
ATOTs+USLA	6	9	55	70
Median age	66	49	63	61
Range	54-77	38-62	40-80	38-80

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56 - DETERIORATION OF PERFORMANCE OF REUSABLE FLEXIBLE URETEROSCOPES, A MULTICENTRE STUDY

Rindorf Dinah, Ockert Lotte

Ambu A/S, Market Access, Ballerup, Denmark

INTRODUCTION AND AIM OF THE STUDY

Functionalities such as uncompromised image quality and bending capabilities of reusable flexible ureteroscopes (rfURS) are important when used for complex ureteroscopy procedures. However, these functionalities tend to deteriorate after multiple use. We aimed to investigate the extent of experiencing deterioration of performance of rfURS, and the amount of impact this has according to urologists world-wide.

MATERIALS AND METHODS

Between January 7, 2021 and February 3, 2021 a total number of 610 urologists performing ureteroscopy procedures in both hospitals and clinics answered an electronic survey about potential deterioration of performance of rfURS at their institution. The 610 urologists include 80 urologists from Germany, Italy, Japan, Spain, and UK, respectively and additionally 70 urologists from France and 140 from US. Data were collected using the online survey tool, QuestionPro and analysed using Stata/SE version 16.1, StataCorp.

RESULTS

Among the 610 respondents 399 (65.4 %) worked at public hospitals, 152 (24.9%) worked at private hospitals and 37 (6.1%) and 22 (3.6%) worked at clinics and ambulatory surgery centers, respectively. The urologists had on average 16.5 years of experience, and the majority (64.8%) used single-use ureteroscopes at their facility. The urologists estimated an average of 57 procedures before the rfURS needed repair and the oldest rfURS in use were on average 5.1 years old. 436 (71.5%) stated, that they had experienced deteriorated performance of bending capability and/or image quality of their rfURS, and 341 (78.2%) of those believed that this deterioration had a ‘high’ or ‘moderate’ impact on their work. 174 (29.9%) rated the image quality of their rfURS as ‘fair’ or ‘poor’ compared to when the scope was brand new. The urologists that experienced deterioration of performance of their rfURS were significantly more likely to also use single-use ureteroscopes at their facility ($p<0.01$) and to have older rfURS in use ($p=0.04$).

INTERPRETATION OF RESULTS

Results show that the majority of urologists use single-use ureteroscopes and report a high number of procedures before repair compared to published research indicating 8-22 procedures before repair1-2. Moreover, the majority of the urologists indicate that the deterioration of their rfURS had a ‘high’ or ‘moderation’ impact on their work. More research is needed to estimate the risk and impact of using deteriorated rfURS for ureteroscopy procedures.

CONCLUSIONS

Optimal bending and image quality of rfURS are essential to achieve the best clinical outcome. Results show that the majority of the urologist experience deterioration of performance of their rfURS, and this mainly has a moderate to high impact on their work. Solutions to avoid suboptimal performance of rfURS should be considered.

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57 - STUDY OF COMPARING HISTORY OF COMPLEX UROGYNAECOLOGY PATIENTS AGAINST EPAQ.

Chatterjee Suvalagna, Bulchandani Supriya

University Hospitals Coventry And Warwickshire, Uhcw Obstetrics And Gyanecology, Coventry, United Kingdom

INTRODUCTION AND AIM OF THE STUDY

Urinary incontinence and prolapse are debilitating conditions significantly reducing the quality of life. They are extremely prevalent, affecting a significant number of women attending gynaecology clinics. The patients mostly present in the clinic with complex symptoms. e-PAQ offers a user-friendly clinical tool, which provides valid and reliable data. The system offers comprehensive symptoms and quality of life evaluation and may enhance the clinical episodes detection as well as the quality of care for women with pelvic floor disorders.

The aim of the study is to compare effectiveness of ePAQ with history against history alone for diagnosis in complex Urogynaecology patients.

MATERIALS AND METHODS

Retrospective collection of data from ePAQ and history in a tertiary level urogynaecology unit. 40 patients were selected randomly from Urogynaecology and PEARL (combined urogynaecology and colorectal) clinics from July 2018 to July 2021. Data was collected from ePAQ and clinic letters into microsoft excel. Fisher’s exact test was used for analysis.

RESULTS

Out of 40 patients 34 were eligible for analysis for overactive bladder and stress urinary incontinence, 24 for prolapse and 26 patients for voiding difficulty. The average age of the patients was 51. The range of parity was between nulliparous and para 5. The additional diagnostic yield by ePAQ for overactive bladder (OAB), stress urinary incontinence (SUI), voiding difficulty(VD) and prolapse was 26.47%, 0%, 66.67% and 16.67% respectively. The Fisher’s exact p value for OAB, VD and prolapse was 0.0294, 0.0031 and 0.01 resepectively. ePAQ contributed additional symptoms over and above history in all 40 patients. History has contributed additional symptoms in 4 patients which ePAQ has failed to identify.

INTERPRETATION OF RESULTS

ePAQ has shown significant additional diagnostic yield for overactive bladder, voiding difficulty and prolapse. The Fisher’s exact p value of each has supported this statement. Although there was no additional diagnostic yield for stress urinary incontinence by ePAQ, it has shown an accuracy of 96.97% for diagnosing the cases and 100% accuracy for excluding the case which are similar to that of the history for SUI. ePAQ enabled us to identify more symptoms than history for complex urogynaecology patients in 100% cases whereas history contributed to additional symptom diagnosis in 10% of cases.

CONCLUSIONS

ePAQ is a promising diagnostic tool giving some extra benefit to the diagnosis of the complex urogynaecology patients. Overall recommendation is to implement a policy of using ePAQ evaluation in all complex urogynaecology patients in addition to history. Further studies are needed to assess the pattern of the yield across age, parity, disease severity related to complex urogynaecology symptoms.

58 - EXTERNAL MEATUS RADIOFREQUENCY COLLAGEN DENATURATION FOR THE TREATMENT OF FEMALE SUI

Biagio Adile, Becker Carla

Asp 6 Hospital, Hospital, Palermo, Italy, Privaty Office, Privaty Ofice, Porto Alegre, Brazil

INTRODUCTION AND AIM OF THE STUDY

Radiofrequency has been proposed in the treatment of SUI, since one of the pathophysiological factors of stress urinary incontinence was the reduction of collagen in 30% of case with loss urethral support ,thus reducing the urethral closure mechanism. Thermal effect produced by RF causes denaturation of collagen,ìmmediate and effective contraction of the fibers, local and acute inflammatory process, activation of fibroblasts, generating neocollagenogenesis. Collagen denaturation is performed circumferentially within the bladder neck and proximal urethral submucosa, with a reduction or inhibition of inappropriate bladder neck and proximal urethral luminal opening during bladder descent.

MATERIALS AND METHODS

We selected 17 patients mean Age 51 years (range 33-87), Parity 2 ,5 (range 0-4), Menopause 10 patients (58,8%), Previous surgery procedure 17,6% (3-Hyst.), Post-menopausal pts were taking systemic or local estrogen therapy pts N= 17 Symptoms SUI grade l 11 pts(64,7%) gradell 5(29,4 %) grade lll 1(5,8 %) ingelman Sundberg score. Exclusion criteria: pacemaker or internal defibrillator or other implanted metallic or electronic device,permanent implant in the treated area,current or history of cancer or prelignant conditions, cardiac disorders, hormone replacement therapy,pregnancy or lactation, Impared immune response, History of current diseases stimulated by heat,diabetes active skin condition, in the treatment area, Skin disordes, Bleeding disorder, Any therapies or medications that may interfere with radiofrequency. Radiofrequency consists in the application of an electrical high frequency current ,ranging from 30KHz to 3000 KHz, The passage of electric current produces three physical phenomena that generates heat in the body tissues as a result of the resistance put up by those same tissues as the current passes through, low-temperature RF delivery results in thermal collagen denaturation elongated, crystalline collagen becomes random-coil gel, Collagen denaturation/healing phase occurs, results in reduced compliance of denatured tissue sites. lndications of radiofrequency: patients with type 1-2 sui,frail elderly population,after undergone multiple failed procedures,after radioterapy and\or radical hysterectomy,where the urethra is fixed and scarred,SUI after genito-urinary fistula surgery. Passive plate is applied in contact with the body in the sacral area without gel ,electrode active in different size with temperature sensor are applied in the external urethral meatus for 2 minutes and in the third middle urethra for 4 minutes,energy heats the connective tissue , shrink and stabilize endopelvic fascia and strengthen pubo-urethral ligaments, monouse covering used,automatic safety features monitor tissue temperatures and impedence is monitored on the display and temperature must always be in a range of 39-41 degrees.We use monopolar radiofrequency with 5 sessions once a week, don't take anti -incontinence drugs , diuretics ,local or sistemic hormone therapy for menopause can be used, RF does not require anesthesia or antibiotic prophylaxis . Criteria to evaluate the result before and after Radiofrequency procedure, Standardized questionnaire, Urodynamic findings (VLPP), Subjective evaluation of leakage, 48 hours micturition diary, 24 hours pad-test, Cough test with a bladder filling of 300 ml

RESULTS

VLPP significantely improved at urodynamics, Pre-treatment VLPP was 13.2 cm H2O, Post-treatment VLPP at 6 months was15.20 cm H2O without urinary leakage, Pad test loss(gr) 24 hours, Pre-treatment 85gr range(32-168), Post-treatment 5 gr range(3-12).

INTERPRETATION OF RESULTS

Radiofrequency Outcomes follow-up after six months	
Follow-up, (No. Of Patients 17)	**1-6 months**
Subjective outcome cured/no leak	**10 (58.8%)Q-max 17.5ml\sec**
Improved	**6 (35.29%)**
Invariated	**1 (5.88%)**

CONCLUSIONS

Radiofrequency is a promising technique to treat female type 1-2 incontinence ,but may be useful in case of previous failed anti-incontinence procedures and in obese patients. RF is a safe, nonsurgical, outpatients procedure , no risk of adverse events ,reduced urinary loss in women and improvement in quality of life. Therefore randomized, controlled, comparative trials should be valuable

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59 - REGIONAL ANESTHESIA AND ACUTE POSTOPERATIVE URINARY RETENTION IN WOMEN UNDERGOING OUTPATIENT MID-URETHRAL SLING PROCEDURES

Torras Caral Ines, Ros Cristina, Angles Sonia, Escura Silvia, Bataller Eduard, Espuña Montserrat

Hospital Clínic de Barcelona, Hospital Clínic de Barcelona, Barcelona, Spain

INTRODUCTION AND AIM OF THE STUDY

Mid-urethral sling (MUS) immediate postoperative management is not widely standardized. Our Unit protocol for outpatient MUS with general anesthesia is to remove the bladder catheter intraoperatively. Afterwards, the voiding function is assessed with the measurement of the spontaneous voiding volume (SVV) and the post-void residual volume (PVR).

During this year of the COVID-19 pandemic, except during the months of the first wave, the surgical activity of Urogynaecology has been around 80% of the pre-pandemic times. This has been possible thanks to an exceptional opportunity for our team to operate in a small hospital linked to our main university hospital, in which COVID patients were not attended. Since the end of June 2020, patients in waiting list for stress urinary incontinence (SUI) surgery were selected according to their profile of risk factors for COVID-19, and informed about the possibility to be operated in this small hospital by the same surgeons and with the same surgical device to correct SUI. If they agree and consent, selected patients would be operated with some different elements: operating rooms, nursing team and anesthesiologists. Due to the anesthesia protocol of this centre, all patients received regional anaesthesia. This type of anaesthesia has been identified as a risk factor for acute postoperative urinary retention (PUR) following outpatient MUS surgery (1). However, in a cohort of patients after same-day outpatient vaginal pelvic floor surgery was no difference noted between anaesthesia types (2). Other risk factors for PUR include elevated PVR on preoperative functional tests, concomitant pelvic organ prolapse (POP) surgery, elevated body mass index and advanced age (3). Although PUR is typically a transient complication, it increases women discomfort and the risk of urinary tract infections.

Despite the different type of anaesthesia, we decided to apply the same protocol for outpatient MUS with general anesthesia and the intraoperative removal of the bladder catheter with subsequent voiding assessment was performed in all patients. Our hypothesis was that the regional anesthesia will not increase the risk of PUR.

The aim of this study was to describe early postoperative complication rate related with bladder function, after MUS surgery with regional anesthesia.

MATERIALS AND METHODS

A case series study was designed with patients who underwent MUS surgery from June 2020 to March 2021, all them prospectively evaluated. We excluded women with risk factors for acute (PUR) following outpatient MUS surgery: age >80 years, concomitant POP surgery or detrusor underactivity demonstrated on pressure/flow measurement at preoperative urodynamics.

The bladder catheter was removed intraoperatively. The first SVV was measured, as well as the PVR (by ultrasound or catheterization). A significant PVR was considered when was >1/3 of SVV (minimum SVV: 150 ml). A 2nd attempt was given after a first voiding trial failure. In women with significant PVR, a continuous bladder catheter was maintained 24-48h after surgery, with the posterior voiding trial assessment. One week and one month after surgery, uroflowmetry with PVR measurement were performed in women normal postoperative PVR.

In order to check the safety of this protocol, the rate of the following complications was calculated: VD with bladder catheterization/PUR, urinary tract infections, bladder/urethral lesions.

RESULTS

During the study period, a total of 223 urogynecological surgeries have been performed by our team, being 116 MUS. POP concomitant surgeries were performed in 32 patients, being one of the exclusion criteria of the present analysis. From the 84 patients with isolated surgery related to MUS (Table 1), 28 women with>80 years old or detrusor underactivity were also excluded. Therefore, the catheter was finally removed intraoperatively in 56 /84 patients (66.7%).

Table 1. Description of MUS surgery among the 84 patients who underwent isolated MUS surgery.

Sling surgery types		
Single incision sling	18	21.4%
Retropubic tension free vaginal tape	34	40.5%
Re-adjustable mid-urethral sling	3	3.5%
Post op re-adjustment mid-urethral sling	7	8.3%
Excision/section	19	22.6%
Vaginal exposure repair	3	3.5%

TOTAL	84	

The total complication rate was 20.2% (n=17). The most frequent complication was urinary tract infection (7.1%, n=6). Bladder perforation in 3 cases during TVT surgery and urethral lesion occurred in 3 patients during sling excision, all them were detected intraoperative, and these 6 patients required an opened bladder catheter during 1 week.
A significant PVR (>1/3 of SVV with a minimum of SVV of 150 ml), was detected in 5 patients (5.9%), but only one of them needed discharge home with bladder catheter (1.2%).

INTERPRETATION OF RESULTS

The complication rate after MUS surgery with regional anesthesia observed in our series, after intraoperative bladder catheter removal, is acceptable.
In a cohort of selected patients without preoperative PUR risk factors, only 1 in 56 women needed discharge home with bladder catheter after intraoperative removal, which seems that regional anesthesia has not a great impact in the immediate voiding function.
However, our results should be interpreted with caution due to the low sample size and the non-controlled design of the study.

CONCLUSIONS

Intraoperative bladder catheter removal after MUS surgery under regional anesthesia seems to be safe and with an acceptable complication rate.

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60 - SURGICAL TREATMENT OF ADVANCED ANTERIOR WALL AND APICAL VAGINAL PROLAPSE USING THE ANCHORLESS SELF RETAINING SUPPORT (SRS) IMPLANT – LONG-TERM FOLLOW-UP.

Levy Gil, Padoa Anna, Marcus Naama, Beck Anat, Fekete Zoltan, Cervigni Mauro

Assuta University Hospital, Female Pelvic Medicine, Ashdod, Israel, La Sapienza University, OBGYN, Polo Pontino, Italy, Shamir Medical Center, Female Pelvic Medicine, Ztrifin, Israel, Szeged University Hospital, OBGYN, Szeged, Hungary, Ziv Medical Center, OBGYN, Zefad, Israel

INTRODUCTION

Following health notification by the FDA in 2008 of serious complications with transvaginal mesh for anterior pelvic organ prolapse, there has been a return to native tissue repairs. Earlier work with a Self-Retaining Support (SRS) Implant showed a high anatomical success rate with minimal implant-related complications over a medium-term follow-up. It is proposed that post-implant complications are more a consequence of the method of mesh anchoring rather than the implant itself. Our system incorporates an ultralight mesh with a frame that provides Level I, II and III support without the need for fixation. The first long-term outcomes of SRS implantation are presented.

METHODS

A prospective multicenter trial was conducted over 2 time periods of the use of the SRS Implant in women with symptomatic anterior compartment prolapse extending their follow-up out to 36 months. Anatomical success (POPQ Stage 0 or 1 or a Ba < -2) was recorded along with subjective success as defined by regular quality of life (PFDI-20 and PISQ-12) questionnaire assessments.

RESULTS

There were 67 patients in the analysis who completed 36 months of follow-up. There was minimal morbidity with 2 cases of urinary retention, one minor frame erosion, one case of delayed urinary difficulty and 2 cases of new-onset stress urinary incontinence. There was a significant improvement in POP stage with an anatomical success rate of 94.3% and a subjective success rate of 98.6%.

CONCLUSION

The long-term outcome of the SRS Implant shows an excellent subjective and objective success with minimal risk of complications or need for reintervention.

61 - ANCHORLESS VAGINAL IMPLANT FOR THE TREATMENT OF ADVANCE PELVIC ORGAN PROLAPSE

Levy Gil, Beck Anat, Zines Yanai, Shaubi-Rosen Michal, Shemer Ofer, Pansky Moti

Assuta University Hospital, Female Pelvic Medicine, Ashdod, Israel

INTRODUCTION:
The use of vaginal mesh in pelvic surgery has previously demonstrated anatomical advantage combined with surgical complications that have called its effectiveness into question.

OBJECTIVES:
To evaluate the safety and efficacy of an anchorless implant for repair of POP in women with risk factors for recurrence.

MATERIAL AND METHODS:
Retrospective evaluation of the SRS implant in women with a ≥2 degree vaginal anterior and apical prolapse with an increased risk of prolapse recurrence. Demographic and clinical data were collected, and women suspected of recurrence, based on telephone questionnaire, were re-examined.

RESULTS:
Sixty women were evaluated. Four (6.6%) underwent reoperation due to prolapse recurrence of the posterior and vaginal apex. No intra-operative complications were documented. 4 (6.6%) had surgical field hematoma treated conservatively. No chronic pelvic pain or dyspareunia were documented. 6 (10%) women who reported bulging sensation in the telephone questionnaire were examined and found to have prolapse of the posterior compartment and not of the anterior or apical compartment treated by the SRS.

CONCLUSIONS:
Use of the SRS demonstrated 93.3% success rate at a mean follow-up of 14 months postoperatively without intra-operative complications and mild post-op complications at follow-up.

DISCUSSION:
Short term data on the use of the SRS demonstrate that anchorless mesh technique may preserve the benefits of vaginal mesh while eliminating surgical complications.

SUMMARY:
The SRS is a safe and effective surgical alternative for the repair of anterior and apical vaginal prolapse in women with advanced pelvic organ prolapse and risk factors for relapse.

62 - PATIENT'S PREFERENCE: SACROSPINOUS HYSTEROPEXY OR MODIFIED MANCHESTER OPERATION, A DISCRETE CHOICE EXPERIMENT

Schulten Sascha, Essers Brigitte, Kluivers Kirsten, Weemhoff Mirjam

Maastricht University Medical Center, Clinical Epidemiology & Medical Technology Assessment, Maastricht, Netherlands, Radboud University Medical Center, Obstetrics And Gynecology, Nijmegen, Netherlands, Zuyderland MC, Obstetrics And Gynecology, Maastricht, Netherlands

OBJECTIVE

To investigate women's preference for modified Manchester or sacrospinous hysteropexy as surgical correction of uterine prolapse.

METHODS

A labelled discrete choice experiment (DCE) was carried out in eight teaching and non-teaching hospitals in the Netherlands. A DCE is an attribute-based survey for measuring preferences. Attributes used in this survey were: treatment success, dyspareunia, cervix stenosis and buttock pain. Attribute selection was based on results of focus groups and expert opinion. For determining the levels for the attributes, a literature search was performed. The DCE contained nine choice sets with two treatment scenarios. Women were asked to choose between modified Manchester or sacrospinous hysteropexy weighing their choice based on the attributed and levels. All women were eligible for primary surgical correction of uterine prolapse. Data were analyzed in a multinomial logit model.

RESULTS

A total of 137 women completed the DCE, for baseline characteristics see table 1. All attributes were statistically significant for sacrospinous hysteropexy: treatment success ($p<0.01$, 95% CI 0.07-0.23), dyspareunia ($p<0.01$, 95% CI -0.08 - -0.03) and buttock pain $p<0.01$, 95%CI -0.75 - -0.20). Only one attribute was statistically significant for modified Manchester: dyspareunia ($p<0.01$, 95% CI -0.08 - -0.03). Based on the attributes and levels used in our DCE, 49% of the patients chose sacrospinous hysteropexy and 51% chose the modified Manchester. Of all the women, 28% chose one of the operations regardless of the levels of the attributes. Therefor a sensitivity analysis was performed without this group of women. This analysis showed that the constant was negative and statistically significant which indicates that the group of women who completed the DCE based on the levels had a slight preference for the modified Manchester operation.

CONCLUSIONS

Based on the results of this DCE, the preference of women for modified Manchester or sacrospinous hysteropexy seems almost equally divided, but women might have a slight preference for modified Manchester. Women choosing for sacrospinous hysteropexy take treatment success, dyspareunia and buttock pain into consideration. When choosing for modified Manchester, only dyspareunia was found to play a role in decision making. A possible explanation might be that women have a positive association with modified Manchester for other reasons than the attributes we used in our DCE. The results of this study represent the preference of a sample of women. Already this sample shows there is a great variety in preference. Our results therefore support the importance of individualized healthcare.

	Total N=138	**Preference modified Manchester n=70**	**Preference sacrospinous hysteropexy n=68**
Mean age (range)	62.6 (41 - 84)	64.4 (44 - 84)	60.5 (41-78)
Mean BMI (range)	25.3 (19.7 - 38.5)	26.2 (19.7 – 38.5)	25.6 (19.9 – 33.3)
Education (%)			
Primary school	4 (2.9)	3 (4.4)	1 (1.5)
Lower/secondary vocational school	75 (54.4)	37 (54.4)	37 (54.4)
High school	11 (8.0)	6 (8.8)	5 (7.4)
Bachelors/masters degree	40 (28.9)	19 (28)	21 (30.9)
Different	7 (5.1)	3 (4.4)	4 (5.9)
Future wish for children (%)	0 (0)	0 (0)	0 (0)
Sexually active (%)			
Yes, with partner	75 (54.3)	34 (50.0)	41 (59.4)
Yes, without partner	2 (1.4)	2 (2.9)	0 (0)
No	61 (44.2)	32 (47.1)	28 (40.6)
Family/friends with surgery (%)			
Good experience	27 (19.6)	17 (25.0)	10 (14.5)
Bad experience	7 (5.1)	6 (8.8)	1 (1.4)
Good and bad experience	19 (13.8)	5 (7.4)	14 (20.3)
No	85 (61.6)	40 (58.8)	44 (63.8)

63 - AN OVERVIEW ON THE USE OF PLATELET RICH PLASMA IN UROGYNECOLOGICAL AND AND PELVIC FLOOR DISORDERS.

Prodromidou Anastasia, Zacharakis Dimitrios, Kalantzis Christos, Protopapas Athanasios, Michala Lina, Kathopoulis Nikolaos, Athanasiou Stavros, Grigoriadis Themos

First Department of Obstetrics & Gynecology, Medical School, National and Kapodistrian University of Athens, "Alexandra" Hospital, Athens, Greece

INTRODUCTION AND AIM OF THE STUDY

The regenerative role of platelet-rich-plasma (PRP) has been investigated in the treatment of pelvic floor disorders (PFDs). We aim to review the current evidence on the use of PRP in urogynecological disorders including vaginal atrophy, pelvic organ prolapse, urinary incontinence (UI), vaginal fistulas and vaginal mesh exposure.

MATERIALS AND METHODS

A meticulous search of 3 electronic databases was performed. All appropriate prosepctive and retropsective studies, case reports and case series were critically appraised.

RESULTS

For the management of vaginal atrophy PRP could be a feasible alternative modality associated with favorable outcomes in vaginal atrophy parameters and patients' satisfaction, particularly in cases of contraindications for hormone therapy. In patients with pelvic organ prolapse, an increase in collagen concentration after PRP application was observed while an improvement in UI symptoms was noted with the use of PRP. A considerable proportion of vesicovaginal fistulas were treated after PRP-based injections.

INTERPRETATION OF RESULTS

The currently available data is still limited of the use of PRP for PFDs.

CONCLUSIONS

PRP appears to be a promising, cost-effective and feasible alternative therapeutic modality for the management of various PFDs. Future well-designed trials are needed to confirm the aforementioned outcomes.

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Streit-Cieckiewicz D, Futyma K, Miotla P, et al. Platelet-Rich Plasma as Adjuvant Therapy for Recurrent Vesicovaginal Fistula: A Prospective Case Series. J Clin Med. 2019;8

Table 1. Characteristics of the included studies						
Year; Author	**Type of study**	**Type of gynecological disorder/procedure**	**Assessed parameters**	**PRP preparation technique**	**Dose of PRP injection**	**Injected areas**
2018; Hersant	Phase II pilot PS	Vulvovaginal laxity/ PRP-HA injections	VHI score>15; vaginal pH; efficacy of treatment; sexual quality; pain (VAS score)	RegenKit-BCT-HA (a mixture of PRP and HA (40 mg [2% w/v] of non-crosslinked HA per tube, 1,550 KDa) Centrifugation 1500g for 5min	4 mL of PRP-HA (2ml PRP mixed with 2 mL HA) Injections every 5mm with 27G caliber needle and a 1-mL syringe	Into the vestibule and the 1st 3cm of the posterior vagina and 2cm posterior wall of the introitus using a speculum or by laterally opening the vaginal walls with the fingers
2017; Kim	CR	Vaginal atrophy and lichen sclerosus/ Filling with autologous fat and PRP	Postoperative photographs	Double spin centrifugation with SmartPrep APC-30 4cc of PRP derived from 30cc of autologous PRP	40cc autologous fat mixed with PRP (1cc syringes)	Subcutaneous layer of the labia majora aseptically via 4 ports
2016; Aguilar	CR	Vaginal laxity-sexual dysfunction/ Vaginoplasty+ PRP with HA	Stabbatsberg sexual self rating scale	RegenKit BCT- 4 mL of PRP-HA Centrifugation 1500g for 5min manual homogenization PRP and HA Harvesting fat (Coleman's technique) centrifigued at 1500g for 1min	4 mL of PRP-HA (2ml PRP mixed with 2 mL HA)	16ml fat cells in the posterior vaginal wall & 10ml PRP-HA epusiotomy scar - vestibular fossa and in the labius minus and majus
PS: Prospective, CS: case report, PRP: Platelet rich plasma, HA: Hyaluronic acid, N/A: Not available, VHI: Vaginal health index, VAS: Visual analog scale						

Table 2. Characteristics of the included studies for the use of PRP in POP						
Year; Author	**Type of study**	**Type of gynecologic disorder/treatment**	**Assessed parameters**	**PRP preparation**	**Dose of PRP**	**Type of application**
2015; Medel	In vitro	POP	Attachement of POP human vaginal fibroblast to 2 meshes	Regen ACR-Ckit 8ml whole blood centrifuge for 5min at 1500g; collection of 4ml supernatant	Coat in 200µL PRP	Coating of 5x5mm squares of absorbable polyglactin mesh and nonabsorbable polypropylene mesh into 200µL PRP
2012; Gorlero	PS	Recurrent symptomatic POP (≥II stage) / anterior posterior or apical repair + PRF	ICS POP grading system; P-QoL questionnaire results pre- and prostoperatively; POP symptoms; QOL; Vancouver scar scale for pigmentation, pliability, height and vascularity; anatomical successful of the prolapse repair	PRF-Vivostat system - polymerization of fibrin activated by simple pH change	120ml blood 6ml autologous sealant (1ml of PRF covers 3-4cm)	Constant spraying direct to the surgical site for 7min PRF polymerized into a white gel
2009; Einarsson	Pilot	Anterior POP/standard anterior repair + APG: (Thrombin-rich serum and platelet-rich plasma) punch biopsy taken from the anterior wall at the beginning of the surgery	RNA of specimen pre- and 3months PO (6-mm punch biopsy); POP-Q (pre-, 3-, 18-and 23-months PO; objective and subjective recurrence; subjective patients satisfaction (from 1 to 5))	52ml of whole blood in 8ml of anticoagulant dextrose Centrifuge PRP was drawn up into a syringe with added glass fibers Once a clot had formed, the thrombin-rich serum was expressed out through a filter into a new syringe	N/A	After plication of the pubocervical fascia and before closure of the vaginal epithelium; Closure of vaginal epithelium with a running absorbable suture
PS: prospective; PRF: platelet rich fibrin; ICS: International continence society; POP: Pelvic organ prolapse; IP: intraoperative; PO: postoperative; QOL: quality of life; APG: Autologous platelet gel						

Table 3. Characteristics of the included studies for the use of PRP in vaginal fistulas

Year; Author	Type of study	Type of gynecologic disorder/treatment	Assessed parameters	PRP preparation	Type of application
2019; Streit-Cieckiewicz	PS-CS	Recurrent VVF/ PRP injection and sugery after 6-8 weeks	Assessment of patient' status by releasing 150ml methylene blue dye into bladder before discharge	150-180ml whole blood collected into sodium citrate tubes-centrifugation (Arthrex Angel System kit) 4-6ml of PRP	4-6ml PRP Transvaginal injection in 15 patients and via cystoscopy in 1 patient in 4-5 points around the edges of the fistula
2013; Shirvan	CS	VVF/ PRP-PRFP arpund and into the VVF tract	Subjective symptoms; ICIQ-UI and ICIQ-UI at baseline and after 10 days and 1, 3 and 6 months after catheter removal	60ml whole blood in 9ml citrate phosphate dextrose buffer; centrifugation 2000g/2min (1^{st}) and 4000g/8min (2^{nd})-4ml PRP. 2ml of PRP +2ml fibrinogen concentrate (PRFP). 4ml PRFP + 1ml thrombin-calcium solution to form rich fibrin glue	2ml PRP around the fistula, 5ml mixture of PRFP with thrombin-calcium injected into the tract within 5min to form a clot

PS: prospective; CS: Case series; VVF: vesicovaginal fistula; PRP: platelet rich plasma; ICIQ-UI: international consultation on incontinence questionnaire-urinary incontinence; ICIQ-QOL: : international consultation on incontinence questionnaire-quality of life

64 - TREATMENT OF THE FEMALE URINARY INCONTINENCE BY VAGINAL LASER AND PELVIC FLOOR FUNCTIONAL MAGNETIC STIMULATION

Hodžic Damir, Valetic Josip, Fureš Rajko

Croatian Society for Pelviperineology, Faculty of Dental Medicine and Health Osijek, Institute for Integrative Gynecology, Obstetrics and Minimally Invasive Gynecological Surgery, Zabok, Zabok, Croatia, University Clinical Hospital "Merkur", Department of Gynecology and Obstetrics, Zagreb, Croatia

INTRODUCTION AND AIM OF THE STUDY

Urinary incontinence occurs as a common problem in women, especially in menopausal age, often related with POP. Minimally invasive treatment of these disorders, as well the LUTS, can be also more successful by combined use of the vaginal laser therapy and pelvic floor functional magnetic stimulation.

MATERIALS AND METHODS

Totally 165 women has been treated by vaginal Er:YAG laser (Smooth XS Dynamis, Fotona, Slovenia) using IncontiLase, ProlapLase, IntimaLase and RenovaLase protocol within 4-6 weeks pause between the sessions. Mean age of patients was 54.7±12.9 (28-88) years and mean parity was 2.0±0.9 (1-4). 80 (48.4%) patients were menopausal age with mean duration from the last menstrual period 14.1±11.0 (1-39) years. 51 (30.9%) patients had additionally POP ≤ 3 stage. 11 (6.6%) patients had prior abdominal or vaginal hysterectomy, as well 12 (7.2%) with colporrhaphy or mesh repair. 6 (3.6%) patients had prior unsuccessful sling or bulking correction of SUI. Mean history of SUI was 5.9±5.2 (0.5-21) years. Mean number of the sessions was 3.2±1.6 (1-10) and mean follow-up was 41.0±15.9 (10-72) months. Totally 143 women has been treated for stress, urgent or mixed urinary incontinence using the novel FMS device (Magneto Stym, Iskra Medical, Slovenia) with 2 magnetic applicators placed into the chair seat and back, using magnetic field power of 2 Tesla and frequency range of 1-80 Hz. Treatments lasted 20 minutes each, repeated twice or three times a week, up to 16 sessions totally. From the all patients of the study, 36 (25.1%) suffered from SUI, 23 (16.1%) from UUI and 84 (58.7%) from MUI. All patients were treated with FMS twice a week for 8 weeks (16 treatments in total) using the treatment protocol adequate for the type of urinary incontinence, i.e. Stress, Mix or Urge. The results were obtained using a patient self-evaluation questionnaire and collected before starting the treatment and after the last therapy.

RESULTS

In patients treated by vaginal laser, initial subjective and clinical improvement was occurred in 154 (93.3%). According to voiding diary, there was noticed reduction of incontinency episodes ≥ 93%, micturition frequency ≥ 82 and nocturia ≥ 74%. Also was occurred clinical regression of POP stage for 1-2 grades. All of these patients referred moderate or strong improvement of QoL There were no adverse effects or thermal lesions. 6 (3.6%) patients initially referred a quite slight improvement, but their treatments are continuing by standard protocol. Treatment failed in 5 (3.0%) patients with severe SUI quitted after 4 sessions and required paraurethral bulking injection. 19 (11.5%) patients required maintaining 1-6 treatments within 12-36 months after finishing initial laser therapy. After the FMS therapy, in patients suffering from SUI, 81% were completely dry, 15% showed significant improvement and 4% did not show any improvement. In patients suffering from UUI, 59% were completely dry, 29% showed significant improvement and 12% did not show any improvement. In patients suffering from MUI, 72% were completely dry, 25% showed significant improvement and 3% did not show any improvement. The frequency of leakage in patient with SUI and UUI decreased from 5.9 to 3.2 and 7.8 to 4.5 episodes per day. In MUI group reduction from 6.3 to 2.9 episodes per day was noted. Significant reduction in nocturia episodes for all types of incontinence was occurred, too. There were also recorded 27 (16.3%) patients previously treated with laser therapy for urinary incontinence or/and POP ≤ 3 stage, in whom FMS followed as additional treatment. In all of them were achieved significantly better results than in patients treated only by laser or FMS

INTERPRETATION OF RESULTS

These results approved the vaginal laser as a safe, non-invasive method for SUI or/and POP, with high clinical efficacy and significant improvement of the QoL in treated patients. FMS is also convenient, non-invasive therapy method for urinary incontinence based on extracorporeal treatment of pelvic floor with powerful magnetic field.

CONCLUSIONS

The favourable clinical outcome of the vaginal laser and FMS treatment was proven in short and mid-term results, promising long-term results as well. FMS is already in use over than 25 years, but modern technology and improved devices makes this method even better and more efficient. Moreover, combination of these methods showed a significant synergistic effectiveness in female patients with all types of urinary incontinence.

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65 - MIDWIFERY KNOWLEDGE ON BLADDER CARE AT A UK TERTIARY HOSPITAL

Araklitis George, Da Silva Ana, O'Kane Miriam, Rantell Angie, Davis Cathy, Robinson Dudley, Cardozo Linda

King's College Hospital, Urogynaecology Department, London, United Kingdom

INTRODUCTION AND AIM OF THE STUDY

Urinary retention occurs in 14% of women after vaginal delivery and up to 24% after caesarean section (1). This can cause overdistention injury, leading to long-term morbidity including incontinence and voiding dysfunction. There are increasing medicolegal claims in the NHS for bladder injuries associated with labour and delivery. Therefore good bladder care by our midwives is important to reduce these risks.
The aim of our study was to assess midwifery knowledge regarding bladder care and what training they had received.

MATERIALS AND METHODS

Between the urogynaecology team and senior midwifery team, we devised a questionnaire using SurveyMonkey. This was distributed to 258 midwives and 130 midwifery students at a tertiary unit in the UK, via email, over the space of two months.

RESULTS

We received 152 responses from 115 midwives and 37 students (response rate 45% and 28% respectively). Majority of our midwives had five or less year's experience (41%). The answers are summarised in the table. Both midwives and students rated their confidence in bladder care as 6 out of 10 in a visual analogue scale.

INTERPRETATION OF RESULTS & CONCLUSIONS

This study highlights deficiencies in knowledge and confidence in bladder care. Part of the problem could be that midwifery is a direct entry qualification, whilst in the past, more senior midwives had nursing backgrounds. Despite the standards of proficiency for midwives (2) stating they should 'provide care that optimises bladder care and health', less than half had minimal formal training and just over half had mandatory training when working as a midwife.

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Questions	Midwife answer	Student answer
Correctly answered urine production increased postnatally	75%	51%
Correctly defined stress urinary incontinence	51%	30%
Correctly defined overflow incontinence	77%	49%
Most popular threshold for urinary retention	>300mls (36%)	100-150mls (32%)
Most popular risk factor for retention	Prolonged labour (97%)	Prolonged labour (95%)
Most popular cause of retention	Overdistention injury (95%)	Overdistention injury (84%)
Most popular cause of incontinence	Overdistention injury (100%)	Overdistention injury (95%)
Most popular action if patient leaking postnatally	Post-void residual (93%)	Post-void residual (89%)
Most popular action to assess empty bladder	Post-void residual check with catheter (75%)	Ask patient if empty (76%)
Those comfortable using bladder scan	22%	16%
Size catheter used in patients	12F female length (44%)	Don't know (49%)
Aware why bladder rest may be needed	Avoid overdistention injury (84%)	Avoid overdistention injury (76%)
Aware why good bladder care is important	Reduce risk of incontinence (97%)	Reduce risk of incontinence and voiding dysfunction (97%)
Bladder care part of pre-registration training	Yes 39%	Yes 43%

How was it taught	One session 60%	One session 43%
Bladder care training in post-graduate period	Mandatory training (54%)	n/a
Bladder care formal competency required	No 81%	Don't know 43%
Do you get enough bladder care teaching	No 85%	No 78%

66 - PRP: A NOVEL OUTPATIENT PROCEDURE FOR THE TREATMENT OF STRESS URINARY INCONTINENCE

Kalantzis Christos, Athanasiou Stavros, Zacharakis Dimitris, Prodromidou Anastasia, Angelou Kyveli, Kathopoulis Nikolaos, Grigoriadis Themos

First Department of Obstetrics and Gynecology / School of Medicine / National and Kapodistrian University of Athens, Alexandra Hospital, Athens, Greece

INTRODUCTION AND AIM OF THE STUDY

Aim of the study was to evaluate the efficacy and safety of platelet rich plasma (PRP) for the treatment of stress urinary incontinence (SUI).

MATERIALS AND METHODS

This was a prospective observational study enrolling women with SUI. 20 consecutive women met the inclusion criteria and attended all follow-ups. All participants underwent 2 PRP injections into the lower one-third of the anterior vaginal wall at 4-6 week intervals. For the PRP preparation the RegenKit® -BCT-3 was used. At baseline they underwent urodynamic studies, a 1-hr pad test and completed the ICIQ-FLUTS and KHQ questionnaires. At follow up visits (1,3 and 6 months) patients underwent the 1hr-pad test and completed the KHQ, ICIQ-FLUTS and PGI-I. Primary outcome was to evaluate post-treatment SUI. Secondary outcomes included assessment of patient reported questionnaires, assessment of urine loss (1hr-pad test) and the level of discomfort during injections (VAS score). Statistical analysis was performed before PRP and 1,3 and 6 months after the last treatment.

RESULTS

A significant improvement of SUI symptoms was observed 3 months after treatment with a further improvement at 6 months (figure 1). A mean reduction of 50.2% of urine loss was observed in the 1hr-pad test. At 6-month follow-up 80.0% of women reported to be at least improved. No adverse effects were observed. Scores of questionnaires and 1hr-pad test are presented in tables 1,2 and 3.

CONCLUSIONS

PRP injections were both effective and safe at least in the short term and could be offered as an alternative outpatient procedure for the treatment of SUI.

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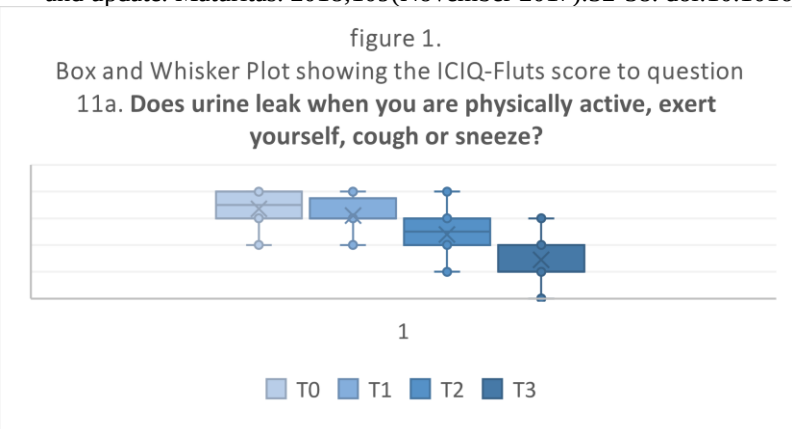

ICIQ-FLUTS	T0 Baseline		T1 1-month		T2 3 months		T3 6 months		P T0-T1	P T0-T2	P T0-T3	P T1-T2	P T1-T3	P T2-T3
	Mean	SD	Mean	SD	Mean	SD	Mean	SD						
Filling score	5,2	3,6	4,4	3,4	4,5	3,2	4,0	3,1	0,438	0,215	**0,035**	1,000	**0,035**	0,241
Voiding score	2,3	3,0	1,9	2,8	2,1	2,8	1,4	1,8	1,000	1,000	0,241	1,000	0,760	0,796
Incontinence score	10,5	3,7	9,0	3,8	8,1	3,8	6,6	3,9	0,171	**0,005**	**0,002**	**0,001**	**<0,001**	**0,009**
TOTAL score	18,0	9,5	15,3	9,2	14,6	9,2	12,0	8,2	0,388	0,058	**0,006**	**<0,001**	**<0,001**	**0,007**

TABLE 1. ICIQ-FLUTS: International consultation on incontinence questionnaire female lower urinary tract symptoms module Note. P-values are from Repeated Measures ANOVA after Bonferroni correction

KHQ	T0		T1		T2		T3		P T0-T1	P T0-T2	P T0-T3	P T1-T2	P T1-T3	P T2-T3
	Mean	SD	Mean	SD	Mean	SD	Mean	SD						
GHP	35,3	26,6	25,0	23,4	23,3	17,6	23,2	18,3	1,000	0,623	0,718	1,000	1,000	1,000
II	71,3	27,1	72,7	21,2	69,0	23,5	57,2	20,6	1,000	1,000	0,775	1,000	**0,049**	0,112
RL	61,7	32,7	60,8	30,0	56,7	33,2	57,2	29,1	1,000	1,000	1,000	1,000	1,000	1,000
PL	68,6	31,1	63,7	28,9	56,8	29,4	57,2	29,1	1,000	0,588	0,870	0,793	1,000	1,000
SL	44,8	34,3	36,6	31,6	37,4	31,4	37,3	29,6	0,657	0,283	0,379	0,989	1,000	1,000
PR	25,2	32,2	28,2	37,9	27,6	38,5	27,1	36,0	1,000	1,000	1,000	1,000	0,971	0,989
E	52,2	32,5	49,6	32,6	51,1	33,9	44,4	33,6	1,000	1,000	1,000	1,000	0,576	0,360
SE	31,4	30,0	29,4	27,3	29,9	27,6	29,8	25,5	0,808	0,808	1,000	1,000	1,000	1,000
SM	67,9	21,8	62,0	25,1	62,7	27,2	54,9	23,1	0,921	1,000	0,120	0,997	0,543	0,336

TABLE 6. Health-Related Quality of Life Assessement Using the KHQ Domain Values
Note. P-values are from Repeated Measures ANOVA after Bonferroni correction

	T0		T2		T3		P T0-T2	P T2-T3	P T0-T3
	Mean	SD	Mean	SD	Mean	SD			
PAD TEST	14,5	7,9	12,7	7,6	8,3	8,7	0,165	**<0,001**	**<0,001**

TABLE 3. Distribution of the results of the 1-hour pad test at baseline (T0), at the 3-month follow up (T2) and at the 6-month follow up
Note. P-values are from Repeated Measures ANOVA after Bonferroni correction

67 - CROSS-SECTIONAL STUDY OF VULVAL DERMATOSES IN WOMEN WITH SELF-REPORTED URINARY INCONTINENCE

Daly Ciara, Azmi Nur Amalia Athirah Binti, Soh Vernie, Hardy Claire

Ulster Hospital, Ulster Hospital, Dundonald, United Kingdom

INTRODUCTION AND AIM OF THE STUDY

Incontinence-associated dermatitis (IAD) describes skin damage associated with exposure to urine or faeces. It causes patients significant discomfort, sleep disturbance and loss of independence (1). Urinary incontinence (UI) may additionally be associated with other vulval dermatoses e.g. Lichen Sclerosus (LS), but there is limited research on prevalence and causation (2).
The aim of this study was to determine the prevalence of vulval dermatoses in women with urinary incontinence attending a specialist vulval clinic.

MATERIALS AND METHODS

Retrospective departmental audit databases were reviewed to identify women self-reporting urinary incontinence at a specialist vulval clinic (9/6/2015 - 9/3/2021). The database is compiled by reviewing dictated outpatient letters and electronic records.
Baseline characteristics, clinical diagnosis (and histopathological when undertaken) and vulval symptom improvement outcomes (patient-reported: Cured, Improved, No change, Worse) were extracted. A cross-sectional analysis was performed to identify the prevalence of vulval dermatoses in this group.
Ethical approval was not required as the data were unlinked and anonymous.

RESULTS

Of 538 new patients seen over 5.75 years, n=107 (20%) self-reported urinary incontinence. Baseline characteristics are presented in Table 1.
The majority n=71 (66%) had not had tried first line conservative management for UI (i.e. physiotherapy, OAB medication, continence nurse specialist review), despite n=54 (50%) using incontinence pads.

Table 1. Baseline characteristics of the study participants

	Median	Range
Age (years)	71	28-98
BMI (kg/m2)	30	18-60
Parity	2	0-9
Incontinence type	Number (n=)	Percentage (%)
Stress Urinary Incontinence (SUI)	35	33
Overactive Bladder (OAB)	30	28
Mixed	18	17
Unspecified	24	22

The most common vulval symptoms were: Itch n=72 (67%), pain n=52 (49%), a lesion=47 (44%) and irritation=35 (33%). The most common clinical diagnoses were: Lichen Sclerosus (LS) n=53 (50%), eczema n=35 (33%), atrophy n=19 (18%) and psoriasis n=12 (11%). n=22 underwent vulval biopsy. The top histopathological diagnosis was chronic inflammation (n=7, 32%) in keeping with irritant dermatitis; n=5 (23%) had LS.

Of n=57/69 (83%) who completed scheduled follow-up for vulval symptoms, outcomes were as follows: Cured n=3 (5%), Improved n=44 (77%), No change n= 9 (16%), Worse n=1 (2%).

INTERPRETATION OF RESULTS

The study shows the prevalence of UI in this cohort of 20%. LS was diagnosed in half of the cases. Male LS has been associated with UI however, the association of female UI and LS is under study (2). The finding of 83% cure/improvement in vulval symptoms is encouraging. Strengths of this study were diagnosis by gynaecologist with a specialist interest in vulval disease and histological confirmation when required. Limitations: This was a retrospective review using subjective, non-validated outcomes which may be subject to bias in reliability and may lack generalisability.

CONCLUSIONS

The most prevalent vulval dermatoses in women with urinary incontinence were lichen sclerosus, eczema and atrophy. With appropriate dermatological treatments, most women with urinary incontinence achieved improvement or cure in vulval symptoms.

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68 - DOES ENDOCRINE THERAPY FOR BREAST CANCER AFFECT THE EFFICACY OF CO2 LASER TREATMENT IN WOMEN WITH VULVO-VAGINAL ATROPHY AND SEXUAL DYSFUNCTION?

Bonavina Giulia, Casiraghi Arianna, Ruffolo Alessandro, Parma Marta, Candiani Massimo, Salvatore Stefano

IRCCS San Raffaele Scientific Institute, IRCCS San Raffaele Scientific Institute/Università Vita e Salute/Obstetrics and Gynecology department, Milano, Italy

INTRODUCTION AND AIM OF THE STUDY

Breast cancer (BC) is the most common cancer in women1. Improvements in adjuvant systemic therapies has significantly improved survival but, chemotherapy and antiestrogenic therapy may induce a reversible/irreversible menopause status. The majority of women (80%) on aromatase inhibitors (AI) develop sexual dysfunction within the first 2 years of therapy2. Microablative fractional CO2-laser treatment (MLT) is one of the available laser-technologies used for genitourinary syndrome of menopause (GSM) in patients with contraindicated HRT use3.
In this study we aim to evaluate the safety and efficacy of MLT on vulvo-vaginal atrophy (VVA) symptoms and Sexual Dysfunction in BC survivors comparing women with (Group A) or without ongoing Endocrine Therapy (ET) (Group B) for their oncological condition. Our secondary objective was to assess any difference in treatment satisfaction between the 2 groups.

MATERIALS AND METHODS

Women with diagnosis of breast cancer, with at least one VVA symptom were enrolled in this study and treated CO2 MLT system (SmartXide2 V2LR, Monalisa Touch, DEKA, Florence, Italy). A treatment cycle included 5 laser sessions (one every 4 weeks).Effects of the laser treatment on VVA symptoms were measured using a 10-cm visual analogue scale (VAS). Sexual function was evaluated in sexually active women, with FSFI (Female Sexual Function Index). Furthermore, a five-point Likert scale was used by women included in the study in order to rate the overall degree of satisfaction with the treatment. For final analysis recruited women were divided in two different groups, if they were (Group A) or were not (Group B) on actual endocrine therapy (ET). The normal distribution of continuous variable data was evaluated with the Kolmogorov-Smirnov test. Categorical variables were analyzed using the Pearson Chi-squared test. Continuous variables were analyzed Mann–Whitney U-test and the Wilcoxon Rank Sum Test for non-normally distributed data for intra and inter group analysis.

RESULTS

In this retrospective analysis of prospectively collected data we enrolled 117 women with history of BC complaining of at least one GSM symptom. At 20 weeks follow up each VVA-related symptom item resulted decreased, but significantly more in women not currently treated with ET. At baseline, 103 women (88.0 %) were sexually active. After a complete MLT cycle 12/14 women (85.7%) resumed coital sexual activity; 8/10 (80%) in Group A and 4/4 (100%) in Group B (p=0.334). At T1 all FSFI items (excluding Arousal) increased, significantly more in women not on current ET. No statistically significant differences were reported between the two considered groups related to the difference in satisfaction with the treatment.
No adverse effects were reported by any woman in our population.

INTERPRETATION OF RESULTS

Our study demonstrated a significant improvement both in VVA related symptoms and in general sexual function but with different responses between the two considered groups. Women not taking any anti-estrogenic treatment showed a significant greater improvement in all the reported symptoms.

CONCLUSIONS

MLT is effective and safe in improving GSM symptoms in women with an history of BC. Further studies should be designed to evaluate if a longer MLT protocol might contribute to increase treatment outcome, for safety and efficacy, in BC survivors taking ET.

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69 - SINGLE-INCISION MINI-SLING AND TRANS-OBTURATOR SLING FOR STRESS URINARY INCONTINENCE: A 5-YEAR COMPARISON

Ruffolo Alessandro Ferdinando, Bonavina Giulia, Casiraghi Arianna, Parma Marta, Serati Maurizio, Candiani Massimo, Salvatore Stefano

Insubria University of Varese, Insubria University of Varese, Department of Obstetrics and Gynecology, Varese, Italy, IRCCS San Raffaele Hospital, IRCCS San Raffaele Hospital, Vita-Salute San Raffaele University , Department of Obstetrics and Gynecology, Milan, Italy

INTRODUCTION AND AIM OF THE STUDY

Stress urinary incontinence (SUI) is a highly prevalent condition. Conservative measures should be first-line option, but failure is not uncommon, and surgery often represents the treatment of choice1. To achieve mini-invasiveness and improving safety, several typologies of mid-urethral slings have been developed2. Because of their recent introduction both trans-obturator sling (TVT-ABBREVO®) and single incision mini-sling (SIMS-ALTIS®) lack of long-term safety and efficacy data, differently form the retropubic or classical trans-obturator approach that have a growing evidence of efficacy persistency after many years. Grison et al, in a cohort of 92 women, reported similar efficacy rates of SIMS-ALTIS® and TVT-ABBREVO®, but at 1 year follow up3. Therefore, the aim of our study was to compare objective and subjective outcomes in women with SUI submitted to either TVT-ABBREVO® or ALTIS® sling at 5-year follow up.

MATERIALS AND METHODS

A monocentric, retrospective study conducted at IRCCS San Raffaele Hospital of Milan, including women complaining of isolated SUI and with proved urodynamic stress incontinence (USI) treated with an inside-out trans-obturator (TVT-ABBREVO®) or a single incision (ALTIS®) sling. Women with urodynamically proven detrusor overactivity (DO) were treated with antimuscarinics or β3 agonists for at least 12 weeks prior to and after surgery. At 60 months of follow-up each woman was assessed subjectively with two validated questionnaires (UDI-6 and ICQI-SF) and objectively with a cough stress test. Adverse events were collected. Uni- and multivariable analysis were performed in order to identify potentially risk factors involved in the failure of the anti-incontinence procedures and in de novo overactive bladder (OAB) symptoms development.

RESULTS

During the study period, 106 women underwent anti-incontinence procedures. Six patients (5.66%) (2 in ALTIS® cohort and 4 in ABBREVO® cohort) were lost at follow up. Forty-two patients were enrolled in the ABBREVO group and 58 in the ALTIS group. No significant difference was found between TVT-O-ABBREVO® and ALTIS® in subjective (88.1% vs 89.7%, p=0.806) and objective (81.0% vs 86.2%, p=0.479) cure rates (Table 1). Subjectively, improvement in urinary distress resulted statistically significant in both groups compared to baseline (p<0.001). Long-term post-operative complication rates (i.e. de novo overactive bladder-OAB and sling exposure) were similar in the two groups. Factors possibly involved in anti-incontinence procedures failure and in development of de novo OAB resulted not significant.

INTERPRETATION OF RESULTS

Our study, comparing TVT-ABBREVO® and SIMS-ALTIS® at 5-year follow up showed a maintained good objective and subjective success rate for both procedures, without any significant difference. Therefore, at our knowledge this is the first study comparing SIMS-ALTIS® and TVT-ABBREVO® for clinical safety and efficacy at a follow up longer than 1 year. Moreover, for both procedures the improvement in urinary symptoms, revealed by validated questionnaires as the UDI-6 and the ICIQ-SF, was statistically significant compared to baseline at 5-year evaluation. Our data are consistent with what reported by Grison at one year follow up. Furthermore, the safety profile of these devices resulted quite good since, in our study, complications were mainly of Dindo II grade and managed with conservative methods (i.e antimuscarinics or β3 agonists for De novo OAB). Despite the good success rate, we have also tried to identify predictive factors for surgical failure and for OAB development looking at several preoperative, demographic, anamnestic, and clinical characteristics, but we could not find any significant predictor factor.

CONCLUSIONS

ALTIS® and ABBREVO® slings can be considered safe and effective options for treatment of SUI, with promising results at long term follow up.

TABLES

Table 1. SUI objective and subjective cure rate at 5-year follow up.

	Total	Abbrevo	Altis	p-value
Objective outcomes, n (%; 95%CI)				
Objective cure with data available	84/100 (84.0; 76,0-91.0)	34/42 (81.0; 66.7-92.9)	50/58 (86.2.; 75.9-94.8)	0.479
Assuming all missing data are failure	84/106 (79.2; 71.7-86.8)	34/46 (73.9; 60.9-87.0)	50/60 (83.3; 73.3-93.3)	0.236
Assuming all missing data are cured	90/106 (84.9; 77.4-91.5)	38/46 (87.0; 76.1-95.7)	52/60 (86.7; 78.3-95.0)	0.563
Subjective outcomes, n (%; 95%CI)				
Subjective cure with data available	89/100 (89.0; 83.0-95.0)	37/42 (88.1; 76.2-97.6)	52/58 (89.7; 81.0-96.6)	0.806
Assuming all missing data are failure	89/106 (84.0; 76.4-90.6)	37/46 (80.4; 69.6-91.3)	52/60 (86.7; 76.7-95.0)	0.386
Assuming all missing data are cured	95/106 (89.6; 84.0-95.3)	41/46 (89.1; 78.3-97.8)	54/60 (90.0; 81.7-96.7)	0.884

SUI: Stress Urinary Incontinence; CI: Confidence Interval

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70 - SAFETY AND EFFICACY OF A TITANIUM-COVERED MESH TAPE FOR STRESS URINARY INCONTINENCE (SUI) SURGERY

Attila Major, Cornelia Betschart, Bouquet de la Jolinière J, Dubuisson J-B, Feki A, Fahmi A-C

Femina Gynecology Center Geneva & University of Fribourg, Switzerland, Department of Obstetrics & Gynecology, University of Zurich, Switzerland

INTRODUCTION AND AIM OF THE STUDY

The insertion of midurethral slings is the gold standard surgical treatment for SUI. However, synthetic tapes for surgery have fallen into disrepute lately because of inflammation and erosion caused by such tapes. Titanium is known for less inflammation and foreign body reactions and is used safely for various medical prosthetic devices. Long-term satisfaction, cure rate and safety of a new titanium-covered transobturator tape in comparison to common tape for the treatment of stress urinary incontinence (SUI) was assessed in this comparative clinical study.

MATERIALS AND METHODS

A prospective study was conducted with 151 patients. A total of 70 patients underwent transobturator sling surgery with titanium tape (titanium group, TG) from 2011 to 2019, and a historical control group (CG) of 81 patients were treated with a non-coated tape and underwent incontinence surgery from 1999 to 2009. We compared patient-reported outcome measures (PROMs) with the incontinence outcome questionnaire (IOQ).

RESULTS

The median follow-up was 2,5 years. The improvement of urine incontinence was 83% in the TG and 80% in the CG. Patient satisfaction was better in the TG (27.1 ± 18.9) compared to the CG (34.2 ± 18.5), according to the IOQ quality of life extended score. In the TG group following results were observed (statistically significant): 1.) shorter time of recovery, 2.) improvement of sex life, 3.) less common voiding dysfunction.

Additionally, TG had a reduced reoperation rate: Only 3 in the TG needed a reoperation for SUI compared to 10 patients in CG ($p = 0.03$). Due to vaginal tape exposition tape excision had to be performed to only one patient in TG (1.4%) and this was appearing three years later after sling placement. In contrast, in CG conventional polypropylene tape exposure occurred to three patients (3.7%) and this already between 2 and 18 months after surgery.

INTERPRETATION OF RESULTS

The most significant confounding factor for the IOQ score between both groups was the age of the participants. The age disparity was however eliminated using an ANCOVA test to make the groups comparable. Strengths of the study are the sample size, the long uniform duration of the follow-up, the use of the same questionnaire on a similar population of patients and the comparable groups of patients after age alignment. One reason of the improvement of sexual life in TG is the rare occurring and late onset of titanium-covered tape exposure.

CONCLUSIONS

The titanium-covered sling is safe and is superior to common polypropylene tape. It has a positive impact on sex life, recovery time and voiding dysfunction.

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71 - ASSOCIATION BETWEEN HELP-SEEKING BEHAVIOR AND PAIN LEVEL IN WOMEN WITH DYSPAREUNIA. RESULTS FROM AN ONLINE SURVEY.

Joanna Sierenska, Zofia Barcikowska, Grzybowska Magdalena Emilia

Medical University of Gdansk, Department of Gynecology, Gynecological Oncology and Gynecological Endocrinology, Gdansk, Poland, The University Medical Center, The University Medical Center/ Independent Team of Physiotherapists, Gdansk, Poland,

INTRODUCTION AND AIM OF THE STUDY

Dyspareunia is defined as pain associated with intercourse, which may be a symptom of a generalized medical disorder1. It is one of the most common sexual disorders in women and the reason why a significant number of women seek medical help. It affects from 7.5 to 21% of women2. Treatment of dyspareunia depends on the diagnosis and may include pharmacotherapy, urogynecological physiotherapy, psychotherapy, sex education, and surgery. Only 18.6-31% of women seek medical help, mostly from a gynecologist or general practitioner3. Physiotherapists use various practical methods of treating musculoskeletal disorders, postural and skeletal asymmetry, and soft tissue mobilization. Techniques such as massage, connective tissue and scar release, as well as osteopathic techniques, including visceral and genitourinary manipulation, are used. However, there is no unified standard of diagnosis and therapy, which is an obstacle to the effective care of patients.

The aim of the study was to assess the prevalence of dyspareunia in Polish women of reproductive age and to verify the help-seeking behavior among those affected by the painful intercourse.

MATERIALS AND METHODS

The study was conducted between October 2019 and April 2020, only women over 18 years of age were enrolled. An online Google survey was undertaken and disseminated using the Facebook social network. Among the respondents, the knowledge of the subject of dyspareunia and its treatment, the level of pain and seeking help behavior were analyzed. It was verified how the level of pain affects the quality of sexual life and the frequency of intercourse, as well as whether it affects the help-seeking behavior. The Female Sexual Function Index (FSFI) was used to assess the sexual function of the surveyed women. The Numerical Rating Scale (NRS) was used to assess pain. The obtained data were analyzed using the Student's t-test and the Pearson correlation coefficient.

RESULTS

The questionnaire was completed by 218 women aged 26.8±6.8 years, with a mean BMI of 22.5±3.4 kg/m2. Among the respondents, there were 77 (35.3%) women with dyspareunia and 141 (64.7%) without dyspareunia. The problem of dyspareunia was reported to a gynecologist by 32 (41.6%) respondents, by 14 (18.9%) to a physiotherapist, and 36 (46.8%) women did not seek help (p=0.01). The mean pain reported by respondents with dyspareunia was 5.4 ± 2.1 on the NRS. The mean NRS level was 6.3±2, 6.4±2.1, and 4.7±1.7 for patients seeking help from a gynecologist, physiotherapist and not seeking help, respectively (p<0.001). Only 35 (45.5%) women with dyspareunia and 53 (37.7%) women without dyspareunia were aware of urogynecological physiotherapy (p=0.07). The cause of dyspareunia was diagnosed in 21 patients (27.3%). The level of pain was significantly correlated with the frequency of sexual intercourse among respondents suffering from dyspareunia (r=-0.27, p=0.01). Women with dyspareunia had significantly lower scores in the FSFI pain domain (p=0.02). However, total FSFI score did not differ between the groups (p>0.05).

INTERPRETATION OF RESULTS

The study showed that dyspareunia affects a large group of women, but few of them actually use medical help or do not know which specialist they can turn to with this dysfunction. Women who experienced greater pain were more likely to seek help from specialists. Due to the lack of knowledge, a very small group of women reported their complaints to a physiotherapist. Women reported the problem to a gynecologist much more often, if at all. In addition, the level of pain significantly influenced the frequency of intercourse and impaired sexual function of women with dyspareunia.

CONCLUSIONS

Dyspareunia can affect up to a third of women, but only half of them, despite the reduced quality of sexual function, seek help from specialists. The most frequently chosen specialists are gynecologists. Physiotherapists are the less frequently selected professional group in the treatment of dyspareunia.

Table 1 The level of pain in patients with dyspareunia depending on the help-seeking behavior.

	Gynecologist	Physiotherapist	Did not seek help	p*
n	32 (41.6%)	14 (18.9%)	36 (46.7%)	0.01
NRS level (mean±SD)	6.3±2	6.4±2.1	4.7±1.7	<0.001

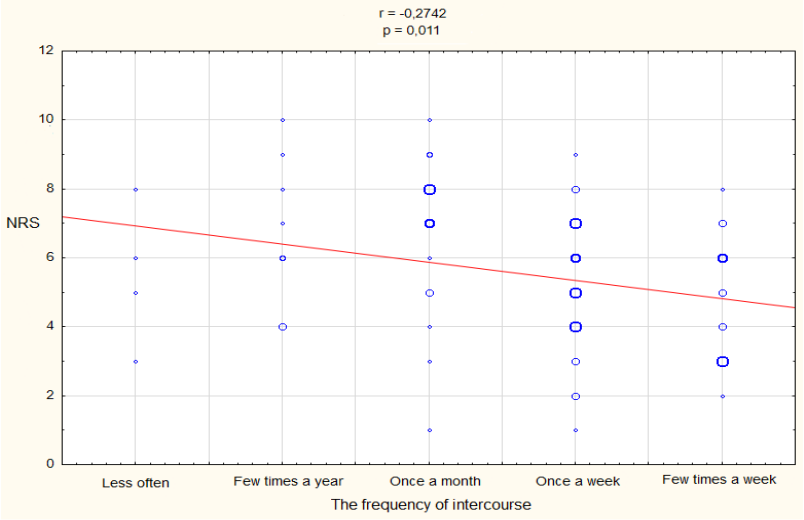
*Student's t-test

Table 2 FSFI scores in women with dyspareunia and healthy controls

domains	Dyspareunia (n=77)	Control (n=142)	p*
desire	3.4±1.3	3.6±1.2	>0.05
arousal	3.7±1.6	3.7±2.2	>0.05
lubrication	4.1±1.8	4.0±2.4	>0.05
orgasm	3.6±1.9	3.6±2.3	>0.05
satisfaction	3.8±1.8	3.9±2.3	>0.05
pain	3.1±1.8	3.9±2.7	0.02
total score	21.7±8.3	22.7±11.7	>0.05

*Student's t-test

Figure I Correlation of the sexual intercourse frequency with the level of pain in women with dyspareunia**



**Student's t-test, Pearson correlation coefficient

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72 - MICRO HYPERTHERMIA BY LASER AS NON-INVASIVE TREATMENT FOR SUI- THE CASE OF A 33 YEAR OLD PATIENT WITH EXTREME SHORT URETHRA, WHICH SUI GRADE III AFTER SPONTANEOUS DELIVERY

Andrzej Kuszka

Obstetrical-Gynecological Dept., Hospital Preetz, Preetz, Germany

INTRODUCTION AND AIM OF THE STUDY

We report the case of a 33 year old patient which SUI grade III after spontaneous delivery. During examination we found out that urethra length was only 15 mm. As normal we see a urethra length of 30-50 mm. Due to this extreme short urethra and increased possibility of unwanted outcome we rejected operation with mesh or string. Therefore patient had local estrogen and Yentreve medication. After three month this and alternative pharmaceutical therapy was rejected by the patient. Therefore we had to treat this patient with a new intraurethral laser system. This therapy had a considerable improvement of patients quality of life.

MATERIALS AND METHODS

In April 2019 a registered gynecologist transferred a 32-year old patent to our clinics with gynecological anamnese of SUI grade II after spontaneous delivery, patient had no operative interventions before.
Pop-Q and urodynamics were inconspicuous. During gynecological examination we found front compartment with signs of atrophy, or rectocele and cystocele grade 1, middle compartment with descensus uteri grade 1 and rear compartment with rectocele grade 1. Functional examination with filled bladder showed massive urine leakage when straining and coughing. Vaginal sonography gave us unclear structure with low echo of about 17x14mm right side paraurethral, uterus was retriflectid in the cavum.
Abnormalities we could find during pelvic floor sonography. Funnel formation of the urethra under stress. Sonographic measurement of residual urine gave 20 ml. The most prominent abnormalities were positive palpation test. We diagnosed SUI grade 3, a light hypotension and intrinsic sphincter deficiency. The urethra length we measured was 15.7 mm (bladder filled with 230 ml). In comparable situation a normal length will be about 30 mm.

Therapy I: Our first approach was conservative treatment: 3x local estrogen per week, continuing with regularly pelvic floor exercise and Yentreve medication. And her registered gynecologist had recommended her to use a tampon therapy.

1st recall after three month: Incontinence was improved by estrogen and Yentreve. Functional examination showed still massive urine leakage when straining and coughing. There we recommended to continue the medication scheme. But from the patient we learned, that she heavily opposed to the medication as she has gained weight during the three months period.

Considerations:

We know that discontinuation of estrogen and Yentreve will bring the patient in the same degree of symptoms as before. As well a standard operative intervention was no choice, due to the shortness of the urethra: Mesh or sling operation need a minimum of anatomic requirements. One major parameter for a success is that the positioning of sling or mesh along the urethra is done properly. A mesh or a sling itself covers approximately 15 mm of the urethra. When a urethra is not longer as the implant, we have just one single position to place it. There is no possibility to adapt properly to the patients anatomy. Under this conditions we can never predict the outcome and therefore advise against.

For such a young and active woman we could not take the risk of a negative outcome, followed by life long history of pain and unhappiness.

From our SUI grade 1 cases we had good experience with laser treatment (1) . The treatment concept is a so called micro-hyperthermia of the pelvic floor tissue. Laser is non-ablative, and works by a pattern of „overheated“ but not denatured small single spots in the tissue. This makes the tissue to produce revascularization and new collagen for better quality of connective tissue. In literature we could find first reports, that intraurethral application of non-ablative thermal load with lasers (2) could as well improve SUI symptoms. The fact, that this treatment could as well be done by intraurethral application of radio frequency devices (3) strengthened our guess that it is a non-ablative thermal effect which is needed for improvement.
Regarding the probability and severe consequences of a negative outcome of a sling or mesh implantation, plus regarding the unwanted side-effects of the medication scheme at this patient and regarding our long experience with non-ablative, thermal application - we had never strong and very seldom slight signs of unwanted side effects - we offered the patient this way of treatment.

Therapy II: As a direct step to enhance her quality of life we shifted from OB-tampons to large vaginal pessaries (Contam extra plus). For a longer lasting effect we added the Laser therapy.
As Laser source we used XS Smooth (Fotona, Slovenia) - Er:YAG-Laser. A special applicator is available for intraurethral therapy. This one is inserted into the urethra. Laser energy will be applied by moving this applicator stepwise all along the urethra from its proximal end to its orifice. Each step is 2.5 mm, at each step four so-called „smooth"-laser pulses where delivered (6J/cm2, 1.4 Hz). In one session three passes where applied. The intervention itself took about 15 min. The patient could leave our office and continue with daily routine the same day. In total we had four laser sessions in a 4 weeks interval.

RESULTS

The first signs of improved situation could be seen already after the 2nd laser session. At recall six month after final laser treatment patient had no more urine loss when normal walking and doing light jogging exercise. She still had urine loss when coughing, but not when mounting stairs. All in all she could reduce number of toilet visits and was able do regular light sport activities. We could achieve a significant reduction of pad-test and she reported as well an overall improvement of her quality of life. Sonography showed a visible funnel without urine loss at bladder filling of 250 ml. This situation was stable as well at the latest recall 1 year after last laser treatment.

CONCLUSIONS

SUI is one of the most dominant forms of Urinary Incontinence. Therefore it is not surprising that our urogynecological community has developed effective ways to treat this disease. And in 95% of the cases normal treatment scheme is the one, our patients benefit most. In this case the anatomic situation was such special, that we saw our traditional treatment scheme as a risk and the alternative medication was seen by the patient as not acceptable. By using a non-ablative laser inside the urethra we could achieve a tissue reaction similar to the effect of the laser on pelvic floor. Although the mechanism of this functional tissue regeneration is not known yet, the clinical result seems to be very promising. The intraurethral laser therapy could give us an additional option in treatment of stronger SUI symptoms. At least it is worth to consider this therapy as one possible non-invasive option. In our case we achieved in a very critical situation at least a partly restoration of functional connectivity strength and an improved quality of life for our patient.

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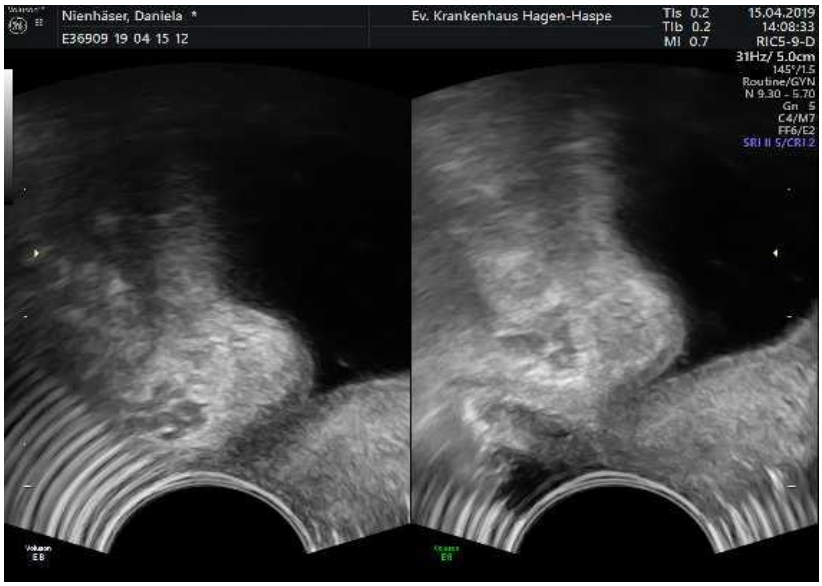

left: funneling and strong urine leakage when pressing
right: after short funnel without urine loss

73 - ASSESSMENT OF BLADDER CARE IN THE INTRAPARTUM AND POSTNATAL PERIOD IN A TERTIARY UNIT IN THE U.K.

Medina Lucena Hayser, El Tokhy Omar, Verma Vandna, Pandeva Ivilina, Pradhan Ashish

Obstetrics and Gynaecology department, Bedford Hospital NHS trust, Bedford, United Kingdom, Obstetrics and Gynaecology department, Cambridge university hospitals NHS Trust, Cambridge, United Kingdom

INTRODUCTION AND AIM OF THE STUDY

Optimal intrapartum and postnatal bladder care is vital to avoid long-term damage to the bladder and urinary tract. Accumulation of evidence has demonstrated that a full bladder can complicate labour: it can lead to delayed descent of the presenting part, reduced efficiency of uterine contractions, delayed delivery of the placenta and subsequently predispose to postpartum haemorrhage (1). Over-distension of the bladder has also been shown to result in long-term bladder dysfunction including voiding difficulties, incontinence, overactive bladder and detrusor underactivity (2).
Prevention of bladder over-distension in labour and the postnatal period holds the key to avoiding long-term urinary tract dysfunction. The National Health System in England has recently set up a long-term plan to improve the prevention, identification and treatment of pelvic floor dysfunction, so that fewer women experience ongoing issues in the puerperium and later in life (3). Assessing our current practice in intrapartum and postpartum bladder care will help to identify deficiencies in our care and guide us to formulate appropriate strategies to improve perinatal pelvic health.

MATERIALS AND METHODS

A retrospective study was conducted which was registered with the local audit department as a quality improvement project. 100 women admitted to a tertiary teaching hospital were selected from the low risk birthing centre and high risk delivery unit between October 2020 and March 2021. Patient demographics and clinical data, including risk factors for the development of bladder dysfunction, were collected using the electronic records. The standards employed for intrapartum and postnatal bladder care are based on our local hospital guidelines, which were developed in conjunction with guidelines from The National Institute for Health and Care Excellence (NICE), as well as from the Royal College of Midwives (RCM). The degree of involvement of the Urogynaecology service was also assessed at providing their expertise in the inpatient and outpatient setting.

RESULTS

Of the 100 patients selected, three were excluded as they delivered within two hours of admission. 97 patients were therefore included in our analysis. Median patient age was 33 (20-45), median BMI was 28.2 (22-36) and median parity prior to delivery was 0 (0-2). 46 patients (47%) had a spontaneous vaginal delivery, 13 patients (14%) had an instrumental delivery and the remaining 38 patients (39%) had either an emergency or elective caesarean section. There was no correlation between incidence of bladder dysfunction and method or location (low risk birthing centre or high risk delivery unit) of delivery.
Intrapartum results: Only 40.3% (29/72) of patients were encouraged to pass urine every two hours. Of those unable to pass urine after two attempts, 92% were managed appropriately with an indwelling catheter (12/13). Only 69% of patients who required an instrumental delivery had an in-out catheter prior to delivery. 64% (9/14) of patients had a catheter for at least six hours after epidural and 84% had a catheter for at least 12 hours after regional anaesthesia following an operative delivery.
Postpartum results: Timing and volume of first void was documented in over 75% of patients. There was poor documentation when conservative measures were needed if unable to pass urine or in cases where urinary output needed to be monitored. Only 62.5% of patients were managed adequately if unable to void after 6 hours with a bladder scan or an in/out catheter. Intrapartum and postpartum results are summarised below in Table 1.
4% (4/97) of women developed postnatal urinary retention. Three out of these four women were reviewed by the Urogynaecology Nurse Specialist as inpatients,, but reassuringly all were reviewed in the outpatient setting.

CONCLUSIONS

The results of this audit highlight the importance of adequate documentation and adherence to the guidelines to avoid long-term bladder dysfunction. The incidence of postpartum urinary retention varies widely between 0.7% to 9%. Although our current data matches the literature, prevention remains paramount to reduce the risk of bladder injury and associated long-term morbidity.

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Table 1: Intrapartum and Postpartum Results

Intrapartum	
Women unable to pass urine after two attempts	13/72 (18%)
Of these, women that were catheterised	12/13 (92%)
Women offered an in-out catheter at instrumental delivery	9/13 (69%)
Catheter remained in situ for at least 6h post epidural/cessation of infusion	9/14 (64%)
Catheter remained in situ for at least 12h post spinal or epidural top-up following operative delivery	32/38 (84%)
Postpartum	
Timing of first void documented	57/75 (76%)
Volume of first void documented	61/75 (81%)
Normal void within 4h of delivery	70/97 (72%)
If unable to void within 6h of delivery, was a bladder scanner or in-out catheter placed?	5/8 (62.5%)

74 - CHANGES IN SERVICE PROVISION IN REGARDS TO BOTULINUM TOXIN A INJECTION FOR OVERACTIVE BLADDER- PATIENTS' EXPERIENCE

Islam Md Shariful, McNeill Sandra, Etuk MB

Altnagelvin area hospital, Altnagelvin area hospital, Obstetrics and gynaecology, Londonderry, United Kingdom

INTRODUCTION AND AIM OF THE STUDY

As per NICE guidelines women should be offered bladder wall injection with botulinum toxin A (Botox) if the cause of overactive bladder is detrusor overactivity detected in urodynamic study after local MDT review. Traditionally Botulinum toxin A(Botox) injection for overactive bladder are given in theatre as a day case. We aimed to change the practice in one centre and started to provide this service in outpatient settings. This is a study conducted in one centre over 6 months period to find out patients satisfaction, difference in effectiveness of Botox injection as well as financial benefit to the trust while this service is being provided in outpatient settings.

MATERIALS AND METHODS

Data was collected from the patients as a form of questionnaire template developed in our department to ascertain patients satisfaction in the outpatient settings in terms of pain, difference in their experience between day-case procedure and out-patients procedure, effectiveness of the outpatient procedure and their recommendation. Data collected from the finance department to establish the difference in expenditure in between day-case and out-patient procedure.

RESULTS

In total there were 24 patients who had the procedure done in the outpatients setting during the study period of July 2020 to Dec 2020. Completed data were collected form 16 patients as 7 patients did not respond and 1 patient received Botox for an indication other than overactive bladder. 56% patients did experience mild pain which lasted less than a minute, 38% patients experienced no pain and only 6% patient experienced pain which was moderate and lasted for 24 hours. 80% patients scored the service as excellent and 20% patients described the service as satisfactory. 88% patients recommended and was keen to come to out-patient clinic to get their repeat dose of Botox. None of them found any difference in effectiveness of Botox injection in comparison to injection in theatre. As per cost we saved nearly 532pounds per patient by doing it as out-patient procedure.

INTERPRETATION OF RESULTS

From the result it can be seen that almost all the patients found outpatient service to an appropriate standard and more than two third patients opted for repeat treatment in the outpatient settings. There was significant difference in expenditure for the same procedure in day case theatre and outpatient service, the latter cut down almost 70 percent of the cost. This proves that change in service provision was effective from the point of patient's satisfaction as well as trust's cost minimization.

CONCLUSIONS

Whilst mild pain for short period of time was experienced by most of the patient, providing Botox treatment in the outpatient settings is a safe and an effective option. Patients are being able to avoid complications of general anaesthesia, being able to get appointment early, noticing same effectiveness as well as hospital is being able to free up theatre slots for other major procedures and saving money, all of which makes the outpatient service of Botox injection for overactive bladder worthwhile.

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75 - TELEPHONE CONSULTATIONS IN UROGYNAECOLOGY, IS THIS THE WAY FORWARD?

Shah Geetika, Saleemi Arooba, Phillips Christian

Hampshire Hospitals Foundation Trust, Basingstoke and North Hampshire Hospital, Basingstoke, United Kingdom

INTRODUCTION AND AIM OF THE STUDY

The COVID pandemic has had a profound impact on outpatient service delivery across all specialities. Telephone consultations have been widely introduced to reduce patient foot fall through the hospital and hence reduce patient and staff exposure to the virus. While several papers have been published on the use of telephone consultations in specialties including medicine, general surgery, and general practice, none were found for urogynaecology.
Our urogynaecology department, in a busy UK district general hospital, introduced telephone consultations for outpatient clinics. We conducted a service evaluation to assess patient satisfaction with this new service and to determine if we should continue to provide telemedicine after the pandemic. We also wanted to evaluate any improvements which could be made to the service.

MATERIALS AND METHODS

We performed prospective data collection of patients seen within Urogynaecology clinics over a 7-month period from February 2021. Patients were split into 2 cohorts: face-to-face consultation group and a telephone consultation group. Patient referral letters / medical notes were triaged and allocated by the senior medical team prior to allocation to each group. Patients were opportunistically recruited. Following a face-to-face consultation, patients were asked to complete an anonymous questionnaire. Those who had a telephone consultation were contacted by phone after their consultation by the first author (who had not performed the consultation) and asked to complete a similar questionnaire verbally over the phone. All questionnaires were standardised using yes/no answers and a Likert based scale.

RESULTS

Data were collected from 101 patients of which 50 had telephone consultations (group A) and 51 had face to face consultations (group B).
Overall, the majority (84%) of patients in group A were happy to have another telephone consultation. While 73% of patients in group B preferred another face-to-face appointment and 6% had no preference (2% did not respond). Most patients in group A (96%) were satisfied with their appointment compared to 92% in group B (though 4% of the latter group had no responses). All patients in group A and 96% in group B understood the suggested management plan.
In group A, 16% were first appointments and 84% were follow up appointments compared with group B, where 47% were first appointments and 53% follow up. Most patients in group A attending either a first appointment (75%) or a follow up appointment (86%) were happy to have another telephone consultation. The majority of patients (83.3%) in group B attending for their first appointment would prefer another face-to-face consultation (8.3% did not answer and 8.3% had no preference). While those attending a follow up appointment in group B were more willing to have a future appoint via telemedicine (29%), though many (63%) did still prefer a face-to-face appointment and 4% had no preference (4% did not respond).
All patients were asked to use a 7-point Likert scale to rate telephone vs. face-to-face consultations. Of those in group A, 38% rated that a telephone consultation as worse than a face-to-face one, while 38% rated it as better, and 24% rated it as no different. In group B, all those who responded rated face-to-face consultations as better (6% did not respond).
Patients were asked a general question about why telephone consultations may be useful and were presented with four multi-select choices as well as free-text space. When answers from group A and B were combined, 69 patients chose safety related to COVID-19, 61 patients found avoiding a commute to hospital beneficial, 50 patients liked not having to park and 47 patients benefited from not having to take time off from work. Free text comments were provided by 48 respondents (28 in group A, 20 in group B). A common theme across both groups (15 patients) was acceptance of telephone consultations if a clinical examination wasn't required.

INTERPRETATION OF RESULTS

It is clear patients have mixed attitudes towards telephone consultations. Those who had a telephone consultation (group A) appear to be more willing to engage in future teleconsultations with minimal differences between first and follow up appointments. This is not surprising given the high satisfaction and high levels of understanding of management plans following telephone appointments in this study, suggesting that communication was not compromised by the absence of non-verbal contact. It may also be a reflection that patients were appropriately triaged by the senior medical team. When asked to directly compare their teleconsultation against a potential face-to-face appointment, it is unclear why 38% of those in group A rated teleconsultations as worse. This should be investigated in future studies.
In contrast, those who had a face-to-face appointment (group B), were less likely to be willing to engage in a potential telephone consultation in the future overall. One possible conclusion is that opinions may change after a patient has experienced a teleconsultation and experienced the benefits. Interestingly, those in group B who attended for a follow up

(vs. a first appointment) were more willing to engage in a future teleconsultation which may be because they did not require an examination.

CONCLUSIONS

This data suggests there is scope for telephone consultations to be utilised successfully in an outpatient setting. Our data suggests this may be more appropriate for follow up appointments. Research has shown telephone consultations are beneficial when providing routine healthcare to patients with chronic conditions. Our data also support previous reports on the benefits of telephone consultations include improving clinic access, speed, and patient convenience. Due to the intimate nature of gynaecology as a speciality it is important to build rapport with patients. This is likely to be easier for patients to do during a face-to-face consultation and especially so if clinical examination is required. There clearly is a role for telephone consultations in the future where follow up appointments are required, and an examination is not needed. This study has provided valuable insight into the patient experience and will help us to streamline our outpatient pathways. There are ways to improve telephone consultations in the future, possibly with the option of videoconference for patients. We are currently evaluating the financial benefit of telephone consultations and its impact on reducing waiting lists for consultations which have become a significant issue following the COVID-19 pandemic.

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76 - ANTENATAL URINARY RETENTION: RISK FACTORS, TREATMENT, AND EFFECT ON PELVIC FLOOR DYSFUNCTION

O'Leary Bobby, Kelly Linda, Keane Declan

National Maternity Hospital, Urogynaecology, Dublin, Ireland

INTRODUCTION AND AIM OF THE STUDY

Pregnancy exerts changes on the physiology of the urinary tract from a very early stage and can affect routine screening methods used for infection1. Bladder symptomatology has been shown to change during pregnancy, and these changes can persist over a year after delivery2.
Antenatal urinary retention (ANUR) is an uncommon, yet severe form of pelvic floor dysfunction (PFD) and research is mostly limited to case reports and case series3. Some risk factors have been identified, such as an incarcerated uterus, or cervical pregnancy, though most women have no antepartum risk factors3. While the pathophysiology of urinary retention in pregnancy is unclear, these women may represent a subgroup that is more susceptible to PFD, both antenatally and in the future. None of the current studies of ANUR have incorporated an assessment of pelvic floor dysfunction.
This study aimed to establish the incidence of and risk factors for antenatal urinary retention in our population, and whether this had any impact on pelvic floor dysfunction.

MATERIALS AND METHODS

This was a cross-sectional study. Women diagnosed with antenatal urinary retention from January 2016 to December 2020 in our institution were identified from a hospital database. Women were included in this database if they were currently pregnant when they required catheterisation—either indwelling, intermittent self-catheterisation or both. The Australian Pelvic Floor Questionnaire was posted to all women along with a patient information leaflet and consent form. Women wishing to take part in the study returned these to the hospital via pre-paid return envelope. No follow-up reminders were sent and any woman who did not return their questionnaire was recorded as a non-responder. Ethical approval for this project was granted by the hospital REC committee.

RESULTS

From January 2016 to December 2020, 41 women were identified as needing some form of catheterisation for treatment of antenatal urinary retention. During the period of this study (2016 – 2020), approximately 40000 women attended the National Maternity Hospital delivering an infant weight ≥500g. Thus, the incidence of antenatal urinary retention was 1-in-1000 pregnancies. Two women were included twice due to subsequent pregnancies, giving a total of 39 women with antenatal urinary retention. Of these, 25 responded to the postal questionnaire, giving a 64% response rate (25/39).
The mean (± SD) age of women in the study was 33 (± 5) and over 70% were in the first trimester (29/41). One woman was 39 weeks when she went into retention, while the remainder (26.8%, 11/41) had completed 16 or fewer weeks gestation. Over two-thirds of women had no identifiable risk factors for urinary retention.
Over 90% of women were initially managed with an indwelling catheter. Of these, 95% were placed for 24 hours or less. Two women requested their catheters to be removed after less than four hours due to discomfort. Neither of these women required any further treatment. One in four women (11/41) required clean intermittent self-catheterisation (CISC) following their in-dwelling catheter. Of these, nine (82%) were voiding normally after a week or less. The remaining women required CISC for 21 and 28 days. None of the women had postnatal urinary retention.
Questionnaire results were available for 25 women. One woman did not respond to one question, giving 99.9% complete data. The median (range) total pelvic floor score was 4.6 (0.2 - 10.7). Bladder, bowel, prolapse, and sexual function scores were, 1 (0 - 6.2), 2.3 (0 - 3.9), 0 (0 - 1.7), 1.7 (0 - 3.9), respectively.
Half of women (12/25) reported a daytime urinary frequency of less than seven, while 30% (8/25) had mild-moderate urinary frequency (8–14/day). The remaining five women reported urinary frequency of between 11–15 times per day. No women reported a daytime frequency of more than 15. The majority of women (80%, [20/25]) denied any urinary urgency. Of those who did describe some degree of urgency, three (12%) reported this as less than once per week, while the remaining two women reported urgency on a weekly or daily basis. Over two-thirds of women (68% [17/25]) denied any subjective slow flow of urine. Five women reported a slow flow on an occasional basis, while the remaining three women reported a slow flow of urine once or more per week.
A feeling of incomplete bladder emptying was reported by less than half of women (40% [10/25]). Five women described this as happening less than once per week, while the other five reported this as more than once per week. One woman did not answer this question. Less than one-in-three women (28%, [7/25]) reported a need to strain to empty their bladder. All of these women described this as occasional (less than 1/week) or frequent (more than 1/week). Nearly all women (84%, [21/25]) reported less than 1–3 urinary tract infections (UTI) per year. Three women (12%) described 1–3 infections per year and one woman (4%) reported that she had between 4–12 per year. No women had more than one UTI per month.
Half of women (52% [13/25]) reported that their bladder problem did not bother them at all. Of those who reported some degree of bother, only one woman (4%) described that it bothered her greatly, while the remainder reported slight (8) or moderate (3) bother.

INTERPRETATION OF RESULTS

This study has shown that antenatal urinary retention (ANUR) requiring catheterisation is an uncommon event, occurring in about 1-in-1000 pregnancies. Most women can be treated with a short period of catheterisation, with only one in four women requiring intermittent self-catheterisation. Women typically present in the late first and early second trimester, and while some risk factors have been identified, most women appear to have an uncomplicated pregnancy before developing acute urinary retention. Self-reported pelvic floor dysfunction is low amongst women who had urinary retention during pregnancy, and most deny any significant bladder symptomatology.

CONCLUSIONS

Antenatal urinary retention is an uncommon pelvic floor pathology and occurs in approximately 1-in-1000 pregnancies. Treatment with an indwelling catheter is only required for a short time, and most women do not require intermittent self-catheterisation. ANUR has few antepartum predictors, and the exact pathophysiology of retention is not clear. Reassuringly long-term pelvic floor dysfunction is minimal in this group of women.

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77 - TACKER OR A STITCH FOR MESH FIXATION TO THE PROMONTORY DURING LAPAROSCOPIC SACROCOLPOPEXY

Grinstein Ehud, Rusavy Zdenek, Abdelkhalek Yara, Gluck Ohad, Deval Bruno

Department Of Obstetrics And Gynaecology, Faculty Of Medicine In Pilsen, Charles University, Faculty Of Medicine In Pilsen, Charles University, Pilsen, Czech Republic, Edith Wolfsom Medical Center, Tel Aviv University, Tel Aviv, Israel, Functional Pelvic Surgery , Geofrroy Saint Hilaire, Ramsay General De Sante, Functional Pelvic Surgery And Oncology, Paris, France

INTRODUCTION AND AIM OF THE STUDY

Laparoscopic sacrocolpopexy or sacrohysterocolpopexy is currently considered a golden standard for apical prolapse treatment. However, there is a high variability in surgical technique. Proper permanent attachment of the mesh to the anterior longitudinal ligament is extremely important for the durability of the surgery. Non-absorbable and absorbable tackers have been introduced to facilitate the fixation, however, there is dearth of data regarding its efficacy in a long-term follow-up. The aim of our study was to compare safety and long-term surgery success in women undergoing laparoscopic sacrocolpopexy and sacrohysterocolpopexy using a non-absorbable stitch or non-absorbable tacker.

MATERIALS AND METHODS

All women who underwent a laparoscopic sacrocolpopexy/sacrohysterocolpopexy from July 2005 to December 2020 were enrolled in this retrospective study. The women were followed up starting from 1 month after surgery, and then annually. The patients were operated and followed by a single surgeon joined by assisted fellows. The hospital database was used to collect the preoperative, perioperative and the follow-up data. In addition, patients who missed their follow-up visit were interviewed by telephone. Variables analysed included, age, BMI, parity, obstetric history, comorbidities, preoperative POP-Q, operation time, hospitalization time, operative and postoperative complications, POP-Q on last follow-up visit, subjective recurrence and reoperation rate. Surgical failure was defined as a prolapse beyond hymen or subjective recurrence or reoperation in the follow-up. The mean follow-up was 3.5 years. Since the length of follow-up was variable amongst the women, the data was collected with the last information carried forward method. The patients were divided according to the mode of mesh fixation to the anterior longitudinal ligament. Patients where non-absorbable sutures either alone or together with absorbable tacker were used were assigned to Group 1, while Group 2 was formed by patients where the fixation was performed with only non-absorbable tackers without a suture. The data were compared based on their distribution of normality using a Wilcoxon Two Sample test or Fisher´s Exact test, p-value < 0.05 was considered statistically significant.

RESULTS

In total, 330 patients were included in the analysis: 296 in group 1 and 34 in group 2. 36 patients (11%) were lost to follow-up and could not be reached by telephone. The groups did not differ in age, parity and comorbidities. More women in Group 1 had higher BMI and significant obstetric history. However, the patients in Group 2 had a more advanced anterior compartment prolapse preoperatively (mean Ba 2.6±1.6 vs. 0.8±3.2, p<0.05), other parameters were comparable. The rate of perioperative complications was similar between the groups. Albeit there was no difference in the postoperative POP-Q parameters, the composite surgical failure was more frequent in group 2 compared to group 1 (40.7% vs. 12.6%, p<0.05). However, the follow-up was longer in group 2 (3.2 vs. 7.2 years, p<0.05). Indeed, the mean follow-up among the failed patients in group 2 was 8.3 years. Table 1 summarizes the most important findings of the study. On secondary analysis of the data comparing a group with only suture and any aid of a tacker we found no difference in complication rate or operative time was found.

Table 1: Tacker or stitch for mesh fixation to promontory

	Group 1 non-absorbable stitch n=296	Group 2 non-absorbable tacker n= 34	p-value	test
Age	62.4±12.3	60.7±9.0	0.22	a
BMI	**24.6±3.9**	**23.1±3.2**	**<0.05**	**a**
Parity	2.4±1.2	2.3±0.9	0.89	a
Significant obstetric history	**113 (38.3)**	**4 (11.8)**	**<0.05**	**b**
Chronic illness	74 (25.1)	4 (11.8)	0.09	b
Operation time	95.4±21.0	94.8±29.2	0.27	a
Severe bleeding	2 (0.7)	0 (0)	1.00	b
Bowel injury	5 (1.7)	0 (0)	1.00	b

Bladder injury	5 (1.7)	0 (0)	1.00	b
Minor complication	12 (4.0)	0 (0)	0.62	b
Major complication	9 (3.0)	2 (5.9)	0.32	b
Days of hospitalization	**2.0±2.4**	**2.4±1.6**	**<0.05**	**a**
Follow-up (months)	**38.2±38.3**	**86.9±52.8**	**<0.05**	a
Back pain	29 (23.4)	2 (12.5)	0,52	b
Pelvic pain	19 (15.3)	2 (12.5)	1.00	b
Surgical failure	**33 (12.6)**	**11 (40.7)**	**<0.05**	**b**

Data expressed as mean ± standard deviation for normally distributed continuous variables and as n (%) for categorical variables. Significant obstetric history defined as severe trauma, macrosomy or forceps delivery in personal history. Chronic illness defined as diabetes, hypertension, vascular and/or neurologic disease. Minor and major complications classified according to the Clavien Dindo classification. Surgical failure defined as a prolapse beyond hymen or subjective recurrence or retreatment in any stage of the follow-up. [a] Wilcoxon Two Sample test, [b] Fisher´s Exact test

INTERPRETATION OF RESULTS

This retrospective study of over 300 sacrocolpopexies/hysteropexies with a mean follow-up of more than 3 years has shown that a non-absorbable suture seems to be a more durable option for fixation of the mesh to the sacral promontory. In experienced hands, the tacker does not lead to any shortening of the operative time. However, it does not carry an increased risk of complications in the long term. The increased risk of failure of the surgery could have been affected by a more advanced anterior compartment prolapse preoperatively and longer follow-up in the group where only non-absorbable tackers were used.

CONCLUSIONS

A non-absorbable suture should be used in order to ensure a durable result of the pelvic organ prolapse surgery. Use of tackers for mesh fixation to the promontory may be associated with an increased risk of failure of the surgery in the long term. In spite of the fact that in experienced hands it does not reduce the operating time, it is a safe technique capable of facilitation of the surgery to less experienced surgeons. Our findings should be validated by a randomized controlled trial with sufficient follow-up.

78 - HYPERACTIVE PELVIC FLOOR IN WOMEN: DOES STRONGER ALWAYS MEAN BETTER?

Szweda Hanna, Milewska Anna Justyna, Wróblewski Maksym, Narojczyk-Swiesciak Elzbieta, Józwik Maciej

Andrzej Frycz Modrzewski Krakow University, Faculty of Medicine and Health Sciences, Warszawa, Poland, Medical University of Bialystok, Department of Gynecology and Gynecologic Oncology, Bialystok, Poland, Medical University of Bialystok, Department of Statistics and Medical Informatics, Bialystok, Poland, Medical Uniwesity of Warsaw, University Clinical Center, Warsaw, Poland, The Centre of Postgraduate Medical Education, Second Department of Obstetrics and Gynecology, Warsaw, Poland

INTRODUCTION AND AIM OF THE STUDY

Pelvic floor training is the first line of treatment for stress urinary incontinence (SUI) grade I of severity, as well as a supportive treatment for higher grades of SUI. Sometimes determined patients exercise too much in expectation of better results [1-3]. Usually strength training is the default way of their pelvic floor muscles exercises. Notably, urogynecologic problems are not expected in young nulliparous female athletes with strong pelvic floor muscles whereas they are commonplace in this cohort. Yet, it is more and more appreciated that excessive pelvic floor training can lead to pelvic floor muscles hyperactivity underlying SUI.

In this study, we analyzed urethral profilometry parameters related to the tone of the pelvic floor, and their possible relationships with SUI.

MATERIALS AND METHODS

The 'PLUS' urodynamic database of 850 dynamic and 1402 static urethral pressure profiles was electronically verified. Using linear regression models, the profilometry parameters: DepQ factor (or, Dep Quotient; it represents the difference between the increase in urethral pressure during the cough stimulus and the calculated resting closure pressure in the same urethral region) and static urethral pressure (PcloRuhe,; it reflects the resting pelvic floor tone) were compared. The DepQ factor was calculated with the formula as follows:

$$DepQ = \frac{\Delta P_{clo}}{P_{cloRuhe}}$$

The advantage of DepQ is that it reflects changes in the urethral pressure, i.e. the reactions/responses of the urethral sphincter and pelvic floor muscles to the increases in the intraabdominal pressure. A proper muscular response is a prerequisite for urinary continence.

```
. regress ln_depq_20 Pclo_res_20

      Source |       SS       df       MS              Number of obs =     449
-------------+------------------------------           F(  1,   447) =  225.37
       Model |  127.197349     1  127.197349            Prob > F      =  0.0000
    Residual |  252.279496   447  .564383659           R-squared     =  0.3352
-------------+------------------------------           Adj R-squared =  0.3337
       Total |  379.476844   448  .847046528           Root MSE      =  .75125

------------------------------------------------------------------------------
  ln_depq_20 |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
Pclo_res_20 |  -.0246763   .0016437   -15.01   0.000    -.0279067    -.021446
       _cons |   5.775484   .0670807    86.10   0.000     5.643652    5.907317
------------------------------------------------------------------------------

. regress ln_depq_20 Pclo_res_20, eform(exp(Coef.))

      Source |       SS       df       MS              Number of obs =     449
-------------+------------------------------           F(  1,   447) =  225.37
       Model |  127.197349     1  127.197349            Prob > F      =  0.0000
    Residual |  252.279496   447  .564383659           R-squared     =  0.3352
-------------+------------------------------           Adj R-squared =  0.3337
       Total |  379.476844   448  .847046528           Root MSE      =  .75125

------------------------------------------------------------------------------
  ln_depq_20 | exp(Coef.)   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
Pclo_res_20 |   .9756256   .0016037   -15.01   0.000     .9724791    .9787824
       _cons |   322.3005   21.62014    86.10   0.000     282.4924    367.7183
------------------------------------------------------------------------------
```

RESULTS

The representative results (for the 20th percentile of the urethral length) are presented in Table 1. Interestingly, an inverse significant correlation ($P<0.05$) between DepQ and resting urethral pressure was found at 7 examined urethral length percentiles, this is, along the whole length of the urethra.

Table 1.

INTERPRETATION OF RESULTS

The higher resting urethral pressure, the lower is the increase in the muscular power generated in response to the intraabdominal pressure increase. It means that strengthening the pelvic floor muscles to some level is beneficial, yet their overactivity with a too high resting tone can lead to disturbances in their function, including a decreased content of pelvic type IIB (fast-twitch) muscle fibres.

CONCLUSIONS

Hyperactivity of the pelvic floor can be one of the causes underlying SUI, as suggested earlier [1, 2]. Instead of improving, excessive training, especially one with vaginal inserts, can somewhat paradoxically, worsen the pelvic floor-related symptoms [3]. Probable underlying mechanisms could be 1) that excessive resting tone of pelvic floor muscles reduces the increment in power of muscular contraction in response to the stress stimulus (such as coughing or running), or 2) a decreased content of pelvic type IIB muscle fibers due to overuse [2]. Beneficial ranges of pelvic floor contractility in adult women need to be established globally.

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79 - THE ROLE OF THE APICAL DEFECT IN THE PATHOGENESIS OF PELVIC ORGAN PROLAPSE: CYSTOCELE WITH APICAL DEFECT

Pawel Szymanowski, Anna Sedakierska-Chudy, Szepieniec Wioletta Katarzyna, Szweda Hanna

Andrzej Frycz Modrzewski Krakow University, Faculty of Medicine and Health Sciences, Cracow, Poland, Andrzej Frycz Modrzewski Krakow University, Faculty of Medicine and Health Sciences, Warszawa, Poland

INTRODUCTION AND AIM OF THE STUDY

The lack of standardization causes misunderstandings in treatment planning and in the evaluation of the effectiveness of surgical methods. The POP-Q System and DeLancey's three levels of pelvic support, do not describe the phenomenon of a cystocele caused by an apical defect. The aim of current study was the examination of the influence of level I defect on building of cystocele and presentation of standardised method of the pelvic floor. The inclusion of the apical defect has a significant impact on the decision making process, as it alters the surgical management of pelvic organ prolapse and promotes methods that focus on repairing the anatomical cause of the defect rather than just its clinical presentation.

MATERIALS AND METHODS

This study includes 302 women, with symptomatic POP. The patients were examined using a new, simple and standardized method of urogynecological examination which assumes the simultaneous application of the basic form POP-Q System and the modified classification of lower pelvic organ prolapse by DeLancey expanded by the impact of level I defect (apical defect) on level II prolapse in anterior compartment.
All patients were assessed according to the following schedule:
patient placed in the lithotomy position with an averagely-filled bladder; assessment of the vulva, perineum and vagina at rest and at maximum Valsalva;
Then using two Kristeller specula, the following were evaluated:
using anterior and posterior specula - level I
using the posterior speculum - anterior compartment, level II - cystocele and level III - urethrocele. The influence of the reposition of level I defect on the cystocele.
using the anterior speculum - posterior compartment, level II - recto- or enterocele, not taken into account in current study
If the cystocele was present, the type of defect was assessed as lateral or central.
Then, after inserting both specula, the patient was asked to perform the Valsalva maneuver during which the specula were slowly pulled out of the vagina and the position of the reference point for level I was assessed. As the reference point, the authors agreed on the vaginal cuff for patients after a hysterectomy or the point where the anterior and posterior fornix merge with the vaginal portion of the cervix. This method allows to assess a defect at level I.
By detection level I defect with concomitant cystocele presence it is necessary to insert the posterior speculum which restores the leading part of the prolapse at level I. Once the level I defect has been compensated, the possible changes in the presentation of the cystocele was evaluated. It is possible that the cystocele completely disappears, if the exclusive cause for its presence at level I defect is reasoned. In case of cystocele caused of mixed defect at level I and II reposition of level I using posterior specula the cystocele get smaller but it doesn't disappear. The cystocele caused exclusive by lateral or central defect requires lack of level I defect.

RESULTS

The 302 patients aged 27-88 years, among the study group 188 (62%) were postmenopausal women, and 114 (38%) premenopausal. In terms of their BMI, 51% of patients had a normal weight, 3% were underweight, 32% were overweight, and 14% were obese. Regarding the family history of POP, approximately one third of women (28%) had positive family history. The demographic and clinical characteristics as well as life-habits are presented in table.
The apical defect was present in 218 patients (72.2%), where the frequency of cystocele caused by apical defect, mixed central or lateral cystocele coexists with apical defect were 30.8%, 9.6% and 31.8% of all cystocele, respectively. Thus, a lateral cystocele with concomitant defect at level I was 3-times more frequent than central cystocele coexists with defect at level I. Cystocele caused exclusive by a defect of the vesicovaginal fascia was found in 84 patients (27.8%) - central defect cystoicele was founded only in 13 patients (4.3%) and in 71 patients (23.5%) a cystocele with a lateral defect was identified. Therefore, isolated lateral defects were 5.5-times more often recognized than isolated central defects in studied population.
Results of the study are presented in Table 1.

Table 1 Distribution of defects in level I and II in anterior compartment

Levels of defects	Number of patients in the study group	Types of defects	Number of patients in the group
Defects at level I or level I and II	218	Isolated apical defect	n = 93 (42.7%)
		Mixed apical/lateral defect	n = 96 (44.0%)

		Mixed apical/central defect	n = 29 (13.3%)
Defects at level II	84	Central defect	n = 13 (15.5%)
		Lateral defect	n = 71 (84.5%)

INTERPRETATION OF RESULTS

Apical defect is a leading cause underlying symptomatic cystocele. Our approach to POP-Q system, especially regarding cystocele assessment, may be a useful tool for planning causal POP treatment. However, prospective analysis of recurrence following corrective surgery according to proposed system of urogynecological examination is needed.
We postulated that the proposed system of urogynecological examination and then appropriate surgical treatment for defect repair can improve the effectiveness of surgical therapy of cystocele and significantly reduce the rate of recurrence.

CONCLUSIONS

The results of this study indicate a significant role of the apical defect in the development of pelvic floor disorders in woman, especially in the anterior compartment. Not taking the influence of apical defect at level II anterior compartment into account while planning surgical procedure exposes a large group of women to ineffective treatment.

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80 - FEASIBILITY, SAFETY AND PATIENT'S SUBJECTIVE SATISFACTION OF INTRADETRUSORIAL ONABOTULINUMTOXIN A TREATMENT IN OUTPATIENT CLINIC SETTING

Gubbiotti Marilena, Serati Maurizio, Rosadi Stefano, Giommoni Valentina, Balzarro Matteo, Giannatoni Antonella, Rubilotta Emanuele

AOUI Verona, Dept. of Urology, Verona, Italy, Insubria University, Dept. of of Obstetrics and Gynecology, Varese, Italy, San Donato Hospital, Dept. of Urology, Arezzo, Italy, University of Siena, Dept. of Medical and Surgical Sciences and Neurosciences, Functional and Surgical Urology Unit, Siena, Italy

INTRODUCTION AND AIM OF THE STUDY

To evaluate the feasibility, safety and patient's subjective satisfaction of intradetrusorial OnabotulinumtoxinA (Onabot/A) treatment performed in outpatient clinic setting, in both patients with idiopathic (i) and neurogenic (n) OAB.

MATERIALS AND METHODS

Between July 2019 to March 2021, iOAB and nOAB patients were selected and treated with Onabot/A intradetrusorial injections in outpatient clinic setting (100 U in iOAB or 200 U in nOAB). Exclusion criteria were: spinal cord injury at or above the sixth thoracic segment, recurrent urinary tract infections (UTIs). Baseline and follow-up evaluation included: 3-day voiding diary, urinalyses and culture, uroflowmetry with post-void residual volume (PVR). The surgical protocol was performed as following: intravesical local anesthesia (lidocaine 2% diluted in 50 ml of normal saline) instilled into the bladder for 20 min; antibiotic prophylaxis for 3 days. Patients remained under observation for 30-60 minutes. The rate of intraoperative and postoperative complications, patients' subjective satisfaction (VAS#1), and pain during the procedure (VAS#2) was assessed. The follow-up visit was scheduled as follows: at 1, 3 months after procedure and then every 6 months. Feasibility and safety were considered as the lack of major complications (bleeding, urosepsis, fever, symptomatic UTI, urinary retention lasting more than 10 days). Subjective patient's satisfaction was achieved when VAS #1 and #2 were > 6 (0: worse; 10: best). We also asked patients whether they would repeat the treatment with the same procedure protocol.

RESULTS

We treated 35 patients (19 females, 16 males). Mean ± SD age was 62.8 ± 14.6. 23/35 (65.7%) were iOAB. Baseline and at last follow-up results are reported in Table 1. Mean ± SD follow- up: 10.2 ± 4.5 months. All findings were statistically improved. Repeated injections were performed in 12/ 35 patients (34.3%) with mean ± SD number of injections: 2.14 ± 0.4. Mean ± SD of VAS#1 and VAS#2 were 7.7 ± 0.4 and 4.9 ± 1.2, respectively. VAS#1 increased in patients underwent to repeated injections ($p< 0.001$). No statistical differences were found between VAS#1 and VAS#2 in iOAB and nOAB ($p< 0.2$, $p<0.4$). 27/ 35 (77.1%) had previous received Onabot/A injections in an in- patient setting, and VAS#1 score significantly increased ($p< 0.001$) in outpatient clinic setting. None of patients had episodes of bleeding or other major complications, during or after treatment. All the patients stated that they will repeat this procedure in local anesthesia.

INTERPRETATION OF RESULTS

Our results demonstrated that Onabot/A intradetrusorial injections in outpatient clinic setting is effective, well accepted and safe. No relevant side effects and major complications occurred Level of referred pain was low, and compliance to the procedure was high.

CONCLUSIONS

To our knowledge this is one of the first study proposing a new treatment protocol of Onabot/a injections in outpatient clinic setting. This procedure was feasible, safe and well tolerated by patients.

Table 1. Baseline and at last follow-up result of the population.

	Baseline (mean ± SD)	**Last follow- up** (mean ± SD)	**p**
Idiopathic OAB (100U) 23/35 pts			
Day- time urinary frequency	12.4 ± 3.5	6.3 ± 3.3	0.000

Night- time urinary frequency	4.6 ± 1.6	1.8 ± 1.7	0.000
Urgency episodes/day	9.1 ± 2.6	3.6 ± 1.2	0.000
UI episodes/ day	5.9 ± 1.4	2.1 ± 1.3	0.000
Qmax (ml)	28.5 ± 2.2	21.7 ± 3.5	0.000
PVR (ml)	18.6 ± 12.4	60.2 ± 44.5	0.000
Neuropathic OAB (200 U) 12/35 pts			
CIC/ die (no.)	3.3 ± 1.3	4.3 ± 1.2	0.06
Urgency episodes/day	8.4 ± 1.3	1.6 ± 1.7	0.000
UI episodes/ day	6.2 ± 1.1	0.7 ± 1.2	0.000

81 - COMPARISON OF TWO MAJOR LAPAROSCOPIC PELVIC ORGAN SUPPORT SURGERY TECNIQUE: LAPAROSCOPIC SACROCOLPOPEXY AND LATERAL LIGAMENT SUSPENSION.

Uysal Aysel, Ekin Sari Gülsüm, Bülbül Gül Alkan, Özdemir Özgür

Akdeniz University, Department of Obstetrics and Gynecology Division of Gynecologic Oncology, Antalya, Turkey, Health Sciences University, Antalya Education and Research Hospital Department of Obstetrics and Gynecology, Antalya, Turkey, Obstretrics and Gynecology, Serik State Hospital Gynecology Clinic, Antalya, Turkey

INTRODUCTION AND AIM OF THE STUDY:
Apical and anterior pelvic organ prolapse (POP) is usually concurrent and apical support is the key stone of pelvic organ support. In this study, we aimed to compare the anatomical results, intraoperative - postoperative complications and clinical results of LSKP (laparoscopic sacrocolpopexy) and LLS(lateral ligament suspension) techniques, which are two common laparoscopic repair tecnique of POP.

MATERİALS AND METHODS:
It is a retrospective and observational cohort study of 78 patients operated in Health Sciences University Antalya Education Research Hospital. Demographic data of patients who underwent LSKP and LLS were collected and pelvic relaxation was graded by POP_Q system. PFDI-20 and PFIQ tests were used to measure the effects of urinary, intestinal and pelvic organ prolapse of pelvic floor problems on the quality of life, PISQ-12 test was used for assessment of sexual symptoms, Beck Depression Scale was used for stress measurement and postoperative patient satisfaction was questioned. After the data were obtained, statistical analyzes were carried out.

RESULTS:
The mean age of the patients was 59.23 ± 7.44 and BMI averages were found 28.16 ± 4.39. The LSKP was performed in 37 of 78 patients and the LLS operation in 41 patients. Intraoperative complications were observed in 1 patient and postoperative complications were observed in 7 patients When the operation and hospitalization times were compared, it was observed that the LLS was significantly shorter than the LSKP. PostopAa value was higher in patients who underwent LLS compared to patients who underwent LSKP; and PostopBp value was higher in patients who underwent LSKP. There was no significant difference between the types of operation in terms of patient satisfaction. There is a statistically significant difference in PISQ-12 total score according to the type of operation and PISQ-12 total scores of patients who underwent LLS are higher than patients who received LSKP. When the total score is evaluated in the PFDI-20 scale, there is no statistically difference between the two groups. When PFIQ-7 scale total score and subscale scores are evaluated, there is no statistical difference.

INTERPRETATIONS OF RESULTS:
Laparoscopic sacrocolpopexy operation is an operation in the hands of surgeons experienced in operative laparoscopy, where patient comfort is at the highest level. In the LLS operation, laparoscopic lateral suspension option should also be offered to patients who applied due to pelvic organ prolapse and who are given the indication of sacrocolpopexy because of the positive effects on postoperative sexual functions, quality of life, pelvic restoration, and due to the short duration of hospital stay and the decrease in the amount of bleeding. It was also found to be more effective in the elderly patient group, in addition to the patient with an anterior defect, and in terms of reversing sexual functions.

KEYWORDS:
Laparoscopic lateral suspension, apical prolapse, laparoscopic sacrocolpopexy

82 - THE DEVELOPMENT, VALIDITY, AND RELIABILITY OF THE MULTIDIMENSIONAL CHRONIC PELVIC PAIN AND RELATED SYMPTOMOLOGY QUESTIONNAIRE.

Patel Mittal, Rahim Asad, Tailor Visha, Bhide Alka, Digesu Alex, Fernando Ruwan, Khullar Vikram

Imperial College Healthcare NHS Trust, St Mary's Hospital, London, United Kingdom

INTRODUCTION AND AIM OF THE STUDY

Chronic pelvic pain (CPP) is a common indication for referral to women's health services, affecting 1 in 4 women (1) and costing up to an estimated £158 million annually to NHS (2). It is a subjective complaint which is difficult to assess and manage but important to be able to measure objectively to measure its burden, impact of quality of life and response to treatments and interventions. The International Continence Society (ICS) has defined CPP as persistent pain lasting longer than 6 months or recurrent episodes of abdominal/pelvic pain, hypersensitivity or discomfort often associated with elimination changes, and sexual dysfunction often in the absence of organic aetiology (3).
There are many pain scales and questionnaires available to assess intensity and impact, however not many have been validated, especially using the evolved and established new definition of pain as a complex condition, rather than a symptom. The aim of this prospective, cross-sectional, observational study is to produce a validated questionnaire to assess pelvic pain as per the ICS standard for terminology of chronic pelvic pain syndromes. This has not been done yet and will provide a valuable resource as a pain assessment tool in the future clinically and as a research tool.

MATERIALS AND METHODS

An original questionnaire was developed for assessment of the pain location, quality and severity, and its impact on quality of life, which can be used for assessment and research purposes. The content and design were based on ICS standard for terminology in chronic pelvic pain syndromes, literature review of established pain assessment questionnaires currently in use, expert opinion, and patient focus group for content and face validity.
All women attending the urogynaecology outpatient department at a large tertiary centre were asked complete a newly devised questionnaire assessing pelvic pain, its exacerbating factors, and its impact on QoL. The newly devised questionnaire was compared against a validated McGill's questionnaire and a control group filling in both questionnaires. The primary study outcome was the validation of the questionnaire. Secondary outcomes included age, BMI, ethnicity, occupational status, allergies, smoking status, pain related diagnosis, co-morbidities, and investigation results.

Statistical analysis was performed using SPSS with the following tests for internal consistency (Cronbach's alpha), criterion validity (comparison with a validated McGill's questionnaire), reliability (Cohen's Kappa coefficient) and reproducibility via test-retest at 1 week. A cut off of $p<0.05$ being used to test for significance.

RESULTS

A total of one hundred and fifty-three questionnaires were completed, 103 women with chronic pelvic pain as per ICS standard definition, 20 women with no reported pelvic pain. 30 questionnaires were repeated after 1 week for reproducibility by women with CPP.
The mean age of women with CPP was 34.6 years (18-68), with a variation in ethnicity 39% White (British/Irish/Other), 27 % Asian (Indian/Pakistani/Bangladeshi/Other), 15% Black (African/Caribbean/Other), 5% Mixed, and 14 % Other (Not stated/Not known). The mean BMI was 23.6 kg/m2 (18-42).
All the subscales had Kappa of 0.64-0.76 (substantial). Cronbach's alpha for the questionnaire overall was >0.9 (Excellent Internal consistency) for 20/21 items and 0.86 (Good Internal consistency) for 1 item. The pain location, type and severity were found to be strongly correlated between the proposed questionnaire and McGill's r =0.63 (strong correlation).

INTERPRETATION OF RESULTS

These results show that CPP affects women of a wide range of ages and ethnicities, and it is important to include this diverse group in the validation process of the questionnaire to make it generalisable. The findings suggest a good convergent and discriminant validity and internal consistency.
The high Cohen's kappa suggests a 'substantial' inter-rater and intra-rater reliability for the qualitative items of the questionnaire. All items of the questionnaire good or excellent internal consistency suggesting that the items are worded appropriately and asked of an appropriate sample. Within the questionnaire, there are some items which are consistently unfilled as not relevant thus may need to be removed from the final version of the questionnaire which may not be apparent from statistical analysis.
The questionnaire is comparable to a validated pain questionnaire; however, the proposed questionnaire has many different components. Therefore, not all items are comparable as no validated questionnaire exists to encompass all the different components relating pain by use of 1 or more existing questionnaires.

CONCLUSIONS

The results suggest that the questionnaire is a reliable and valid measure of CPP in urogynaecology. As the questionnaire was designed by both clinicians and patients, it is clinically relevant and assesses the different aspects of CPP in a patient/user acceptable manner.

Larger number is needed to validate these findings however, the pilot study results are a promising start to the development of a reliable, valid, and useful clinical tool.

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83 - LASER TREATMENT OF FEMALE URINARY INCONTINENCE – RETROSPECTIVE CHART REVIEW

Geoffrion Hugues, Elia David, Rygaloff Nicolas, Heiss Niko, Druckmann Rene

ANEMO-Menopause Centre, /, Nice, France, Cabinet de gynécologie, /, Nimes, France, Clinique Des Landes, /, Saint-Pierre-du-Mont, France, Docteur Rygaloff - Cnetre laser et esthétique, /, Paris, France, Gynecologist Private, /, Paris, France

INTRODUCTION AND AIM OF THE STUDY

Stress urinary incontinence (SUI) is a common cause of urinary incontinence and is affecting large number of women influencing significantly their quality of life. There is a large range of therapies for SUI from behavioral modification to surgical interventions, and these therapies differ in terms of both effectiveness and risk. However, current treatment options raised some concerns regarding safety and efficacy and there was a quest for new treatment options. Several years ago vaginal laser therapy was offered as a minimally invasive treatment option for SUI.
The purpose of this study was to evaluate the efficacy and safety of erbium laser treatment for female stress urinary incontinence.

MATERIALS AND METHODS

In this single center retrospective chart review study the patients having SUI and being treated with non-ablative ErYAG laser from September 2018 to May 2021 were included. Patients received between one and three laser sessions with 4-6 weeks interval. Patients' assessment of the improvement was measured with 11 point numerical scale (0-10, 0 for no change and 10 for excellent improvement). Follow-ups were performed at 2, 4 and 6 months from the beginning of the therapy. Adverse events were registered at every visit and follow-up.

RESULTS

120 patients with SUI were included in this study. Average age was 53.2 years (range 30.9 -88.7). Average improvement scores after each of the three sessions were 4.2/10 after the first session, 6.4/10 after the second session and 8.0/10 after the third session. After the first session 19% of patients haven't seen any change, while 18% of the patients claimed very good-excellent results (grades 8-10) and 81% of patients reported improvement of their SUI condition. After the second session there were just 8% patients without effect, while 42% patients gave very good to excellent grades. After the third session there were no patients without the effect and the number of very good-excellent increased to 55%. Patients tolerated the treatment very well and all of a small number of reported adverse effects were mild and transient.

INTERPRETATION OF RESULTS

Since the introduction of minimally invasive non-ablative erbium laser therapy there were many studies published showing efficacy and safety of this approach for treatment of stress urinary incontinence, however among them there were no studies from France. Our study is presenting the first clinical evaluation of this therapy on French patients and the results we obtained are in consent with the findings of other studies. As it was shown also in studies of Kuzska (1) and Rivera (2) the results are improving with the number of sessions performed and this was true also in our case, where the level of improvement went from 4.2/10 to 6.4/10 and 8.0/10 after each of the three sessions. As our follow ups were relatively short, we are continuing to follow these patients to measure the duration of the efficacy of this laser treatment.

CONCLUSIONS

Erbium laser treatment showed efficacy in improvement of female SUI with no major adverse effects noted. Patients' discomfort during the treatment was minimal and satisfaction very high.

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84 - STANDARDISED PROCEDURE AND STRUCTURED TRAINING PROGRAM CAN ENHANCE THE LEARNING CURVE IN LAPAROSCOPIC SACROCOLPOPEXY

Studer Andreas, Christmann Corina

Department of Urogynaecology, Cantonal Hospital of Lucerne, Lucerne, Switzerland

INTRODUCTION AND AIM OF THE STUDY

Sacrocolpopexy (SCP) is considered the gold standard surgical treatment option for apical and multicompartment pelvic organ prolapse (POP). With the demographic trend of advancing age and women wanting to preserve high quality of life until an advanced age we are undoubtedly asked to offer more minimal-invasive procedure for the management of POP. Therefore, with an increasing demand for these procedures it is necessary to teach young colleagues to preserve high quality of surgical outcomes. Although there is no truly standardised technique to perform a SCP the key steps are broadly similar. The aim of this study is to demonstrate that a structured training program for SCP and implementing a standardised technique can reduce the learning curve with high quality outcome.

MATERIALS AND METHODS

As entering requirements to the teaching program, we ask for completion of the GESEA program up to Level 2: MIGS or equivalent, suturing and knotting dry skill training 1h/week for 1 months before starting the first procedure and during the training as well as internalising the surgical technic divided into sub-steps and knowing the pitfalls and how to prevent. The on-patient training, we begin with assisting 20 procedures and thereafter stepwise overtake defined steps under supervision starting with 4 procedures dissecting the plains and closure of peritoneum followed by 4 interventions performing all additional suturing and thereafter execute 5 complete laparoscopic sacrocolpopexies under supervision before working independently .

To evaluate the progression, we use different parameters such as surgical time, patient satisfaction, the need for assistence and complication rate summed up in a performance-index as shown below.

OP time	<90min	2	PGI-I	any answer better	1	help	no support	0
	90-110min	1		unchanged	-1		senior advice (verbal)	-0.5
	110-130min	0		any answer worth	-2		senior help (surgical)	-1
	130-150min	-1						
	>150min	-2						

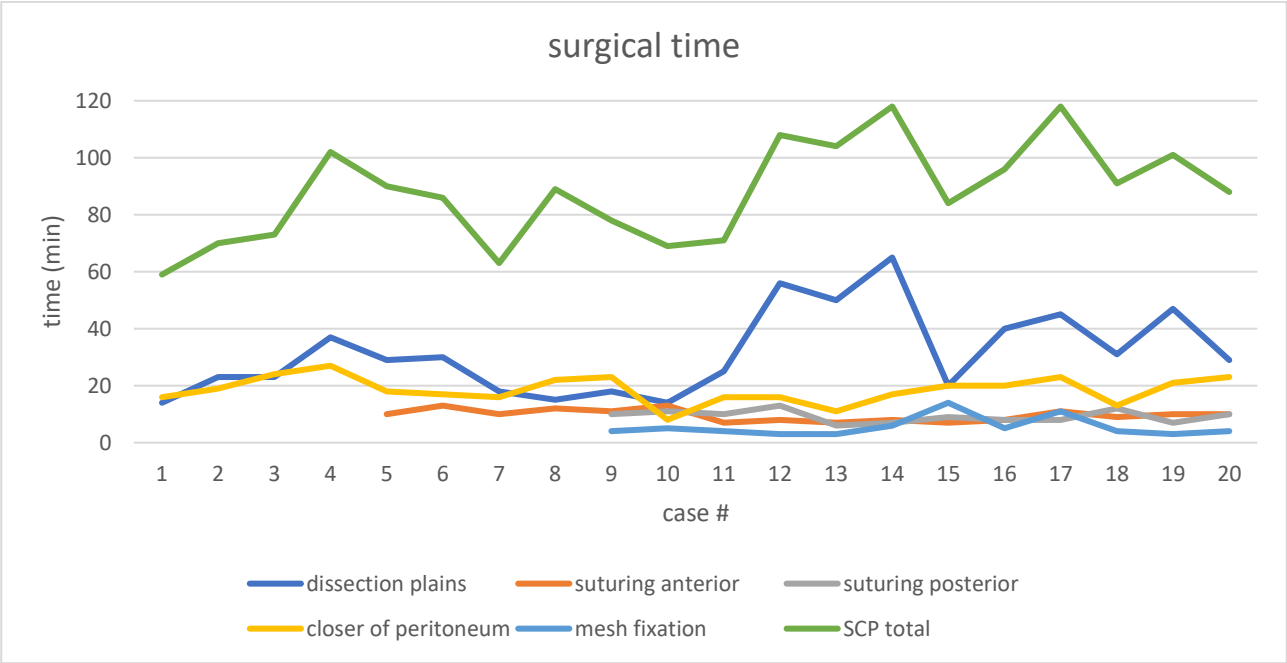
complications according to ClassIntra 1.0 (intraoperative) and Clavien Dindo (postoperative)

	non	0
I	deviation without intervention	-1
II	minor / pharmacological treatment	-2
III	moderate / surgical treatment	-3
IV	life threatening	-4
V	death	-5

Due to educational purposes laparoscopic access and concomitant interventions such as adenectomies most of the times will be performed by junior staff members such as senior registrar or junior consultant. Therefore, all concomitant procedures were subtracted from the overall surgical time for better comparability. To outpoint difficulties or weaknesses individual times of all surgical sub-steps were collected.

RESULTS

The analysis showed consistent adequate surgical times combined with good subjective and objective results right from the beginning of independent surgery. Longer surgical time could clearly by associated to longer duration of dissection with a correlation of 0.88. On the other hand, times for suturing and mesh fixation were fairly consistent. An often subjectively assumed relation of surgical time and obesity could not be demonstrated.
To evaluate the validity of the Performance-Index and complication rate the data volume was too little but the trend shows an adequate reflection of surgical performance and a slightly increased complication rate.



INTERPRETATION OF RESULTS

Although just having minor number of interventions we could show that a good surgical outcome and procedure time compared to a senior surgent can be achieved right from the start of performing a new procedure by conducting a stepwise structured training program as similarly shown by Mowat et al (1). We further could demonstrate that skills not able to be gained off-patient such as tissue dissection or patient factors such as scaring and therefore impede preparation mainly influence the overall surgical time differences compared to trainable skills such as suturing and knotting which were very consistent as proposed by Deprest et al (2).

CONCLUSIONS

Obviously, current data are limited and we therefore will go on gathering detail surgical information to be able to evaluate the so far explored trends. But still we believe to have demonstrated that surgical learning curves even for advanced surgical procedures can be enhanced by a structured program and off-patient training. Thereby the learning curve consist mainly of patient specific factors such as determining dissection plains which can only be learned on-patient.
Therefore, we advocate structured surgery and establishing sophisticated training programs including off-patient skill training to all level of educating.

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85 - IMPACT OF DEFINED RISK FACTORS ON DEGREE OF URINARY STRESS INCONTINENCE: A RETROSPECTIVE COHORT ANALYSIS

Frey Janine, Zellweger Mélanie, Krebs Jörg, Fähnle Ivo, Christmann Corina

Frauenklinik, Cantonal Hospital Lucerne/ Gynecology and Obstetrics, Lucerne, Switzerland, Paraplegiker Zentrum, Paraplegiker Zentrum, Nottwil, Switzerland

INTRODUCTION AND AIM OF THE STUDY

Urinary incontinence is a distressing condition that has a severe impact on quality of life for most affected women. With a prevalence of up to 45%, stress urinary incontinence (SUI) is the most common type. The condition has a huge social-economic impact. To date, the insertion of the suburethral tension free vaginal tape (TVT) is regarded as the gold standard surgical treatment option. However, it is unclear whether all women with severe SUI may benefit equally from TVT. There are no clear risk-benefit analysis' regarding the postoperative success rate. Thus, the aim of our study was to identify common risk factors for severe SUI, and whether successful resolution of incontinence after TVT procedure was different in women with a higher degree of SUI.

MATERIALS AND METHODS

In this retrospective cohort study we included all women undergoing a TVT procedure at our tertiary referral hospital from 2017 to 2020. Data was obtained and extracted from patients' full gynecological hospital patient records.
The primary outcome was to assess whether established risk factors (urodynamic maximum urethral closure pressure (MUCP), functional urethral length, negative urethral stress pressure, sonographic bladder neck funneling, body mass index (BMI), parity and age) were different in women with higher degree of SUI. As secondary outcome we ascertained whether the severity of SUI influenced postoperative continence after TVT. Adverse events including postoperative voiding dysfunction after the insertion of a TVT were evaluated separately.
Standardized cough test was performed at maximal bladder filling in the spine and standing position. Residual volume was assessed and recorded after immediately clean catheterization.

RESULTS

Overall, 168 women were included in the study. Women with a SUI Grade III showed a significantly lower MUCP (median 53 cmH2O in Grade I/II vs. 35 cmH2O in Grade III, p=0.001) and higher BMI (median 25 kg/m2 in Grade I/II vs. 27 kg/m2 in Grade III, p=0.045). Sonographic bladder neck funneling was significantly more often detected in women with SUI Grade III (27% in Grade I/II vs. 57% in Grade III, p=0.004). There was no difference in parity, age, functional urethral length and negative urethral stress pressure.
Overall postoperative continence after insertion of TVT was 88.1% (95% Confidence Interval 82.2%-92.6%). We found no significant difference in postoperative continence between women with SUI Grade III vs. SUI Grade I or II.
For our safety outcome we identified four women with transient voiding dysfunction directly postoperatively which were resolved without intervention 6 weeks later. One woman had a revision 4 days after TVT procedure where the tape was loosened. Two women had persistent voiding dysfunction leading to a revision operation where the tape was split. Two women showed a tape erosion into the vagina. Other than those, there were no other adverse events after performing a TVT procedure.

INTERPRETATION OF RESULTS

The presence of a low MUCP, bladder neck funneling and high BMI as known risk for SUI were significantly more prevalent in severe SUI, suggesting them to be the driving factors behind SUI severity in our cohort. Nevertheless, treatment success of SUI with TVT did not differ substantially in women with more severe SUI, while overall a low occurrence of adverse events was observed.

CONCLUSIONS

In conclusion, TVT is a safe procedure with a high success rate even in women with severe SUI and multiple risk factors for stress urinary incontinence.

86 - A NOVEL TECHNIQUE TO REMOVE A URINARY BLADDER FOREIGN BODY ENDOSCOPICALLY

Al-Zubaidi Mohammed

Fiona Stanley Hospital, Urology, Murdoch, Australia

Urinary bladder is the most common site of foreign bodies in the genitourinary tract. In adults, the common motive associated with insertion of objects into urethra is sexual in nature, which can be missed or migrated into bladder. Herein, we are presenting a 29 year-old lady who was using a urethral sound for sexual arousal when it slipped and migrated into the bladder. A new technique used to retrieve the object from the bladder using Endoloop through the rigid cystoscopy which has been found to be less traumatic and easy to perform.

FIGURE/VIDEO CAPTIONS

Image 1: Urethral sound removed from the urinary bladder using an Endoloop.

87 - ASSOCIATED FACTORS TO URINARY RETENTION AFTER WOMEN PROLAPSE SURGERY

Ferry Philippe, Thirouard Yannick, Mahoi koutou

Gynecologic surgery unit, La Rochelle Hospital, La Rochelle, France, Urologic surgery unit, La Rochelle Hospital, La Rochelle, France

INTRODUCTION

Surgery for genital prolapse involves multiple techniques via the abdominal or vaginal route, each of which has a risk of specific complications that are currently well studied (1). Among the early complications, urinary retention is frequent and the factors associated with it remain poorly understood

OBJECTIVE

To identify associated risks to urinary retention following prolapse surgery.

DESIGN

Retrospective and monocentric study.

SETTING:

Gynecologic surgery unit La Rochelle hospital, France.

POPULATION

208 women undergoing a prolapse surgery from 2016 to 2018.

Urinary retention was defined as a residual volume after voiding higher than 100 ml measured by a bladder scanning device or by total inability to urinate.

Several patients and surgery characteristics were studied, including the age, the weight and the staging of patients 'prolapses. We also studied the methods of surgery and the type of anaesthesia (spinal anaesthesia versus general anaesthesia).

	Patients (n=208)		CI 95%
Caracteristics			
Median age	**67**	(40-92)	
Median BMI, kg/m2	**25,8**	(16.6-45.7)	
<25, n (%)	90	(43,3)	[36,5-50,0]
25-29,9, n (%)	71	(34,1)	[27,6-40,5]
≥30, n (%)	47	(22,6)	[16,9-28,2]
Antecedents			
Median parity	**2**	(0-8)	
Menopause (%)	197	(94,7)	[91,6-97,7]
Hormonal therapy	12	(6,0)	[2,70-9,29]
Hysterectomy (%)	49	(23,6)	[17,7-29,3]
Prolapse surgery (%)	43	(20,7)	[15,1-26,1]
SI surgery n (%)	9	(4,3)	[1,56-7,09]

BIVARIATE ANALYSIS

	Patients	Urinary retention (%)		OR [95 % CI]		p value
Age						
< 65 years	**80**	**5**	**(6%)**	**1,0**		
≥ 65	**128**	**22**	**(17%)**	**3,1**	**[1,1-8,6]**	**0,028**
Prolapse severity (POP Q)						
Grade 1 or 2	52	4	(8%)	1,0		
Grade 3 or 4	156	23	(15%)	2,1	[0,7-6,3]	0,198
BMI						
< 30 kg/m2	161	22	(14%)	1,0		
≥ 30 kg/m2	47	5	(11%)	0,8	[0,3-2,1]	0,588
Preoperative dysuria						
Yes	131	20	(15%)	1,0		
No	76	7	(9%)	0,6	[0,2-1,4]	0,217
Oerative time length						
≤ 60 min	144	21	(16%)	1,0		
> 60 min	74	6	(8%)	0,5	[0,2-1,2]	0,127
Anesthesia						
General	191	24	(13%)	1,0		
Spinal	15	3	(20%)	1,7	[0,5-6,6]	0,417
Surgery						
Laparoscopy	63	5	(8%)	1,0		
Vaginal	145	22	(15%)	2,1	[0,7-5,8]	0,161
Vaginal surgery with Anterior Restorelle®	**62**	**19**	**(31%)**	**1,0**		
Laparoscopy or other vaginal surgery	**146**	**8**	**(5%)**	**0,1**	**[0,1-0,3]**	**< 0.001**

There appears to be a risk of acute urine retention associated with the use of anterior vaginal mesh in vaginal surgery, probably due to the wide dissection of the para vesical fossa (2). It seems even more obvious when the cure is performed in an elderly patient (65+).

All our patients with acute urine retention and urinary catheterization for one to ten days had a satisfactory micturition.

CONCLUSION

Early removal of the urinary catheters is accompanied with a low to moderate rate of retention, all resolved by day 10 and appear to be accompanied by a decrease in urinary tract infections. Factors associated with retention are: age over 65 and the placement of an anterior mesh requiring the dissection of the para-vesical fossae, data to be taken into account for postoperative monitoring.

ACKNOWLEDGEMENTS

Dr Caroline Allix-Beguec for the statistical analysis

Approved and presented to the ethics committee on 09/03/2021 in La Rochelle

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88 - COMBINING DUBUISSON'S LAPAROSCOPIC LATERAL UTEROSUSPENSION WITH ANTERIOR COMPARTMENT MESH REPAIR

Józwik Marcin, Cholewa Karolina, Gola Michal, Józwik Maciej

Department of Gynecology and Gynecologic Oncology, Medical University of Bialystok, Bialystok, Poland, Department of Gynecology and Obstetrics, Collegium Medicum, University of Warmia and Mazury, Olsztyn, Poland, Student, Collegium Medicum, University of Warmia and Mazury, Olsztyn, Poland

INTRODUCTION AND AIM OF THE STUDY

It was observed that hysteropexy is not only helpful to correct uterine descent, but in some cases the uterus elevation reduces cystocele as well. Yet, in a group of patiens with both uterine prolapse and substantial cystocele with lateral defect, the uterus elevation is not sufficient to cure cystocele. Such patients are good candidates for a hysteropexy to cure uterine prolapse, as well as for an anterior mesh implantation to cure cystocele.

Until recently, we were successfully using a single 5-arm mesh implant (Albis, Kalisz, Poland; Fig. 1) to combine the anterior mesh with laparoscopic hysteropexy procedure. This 5-arm mesh has 2 distal arms for transobturator positioning, 2 middle arms for sacrospinous ligament positioning, and the fifth single cranial arm to be placed between the cervix and urinary bladder. Then, the single arm is conducted via a subperitoneal tunnel on the right pelvic wall between the cervix and sacral bone, and fixed to the anterior sacral ligament. Such an approach with the 5-arm mesh yields very good suspension results in patients with massive defects in both the anterior and middle compartments, yet it carries all the difficulties and risks of sacropexy with it.

A novel Dubuisson's lateral suspension of the uterus was developed to omit drawbacks of classical sacrohysteropexy, particularly in obese and elderly women in whom both the Douglas pouch and sacral bone may be difficult to access. In Dubuisson's operation, the cervix is bilaterally anchored to the easily accessible abdominal oblique muscle aponeurosis instead of to the sacral bone.

The purpose of this communication is to report on the feasibility of replacing a 5-arm mesh with a 6-arm mesh anchored using Dubuisson's method [1, 2] in patients with large cystocele and uterine prolapse.

MATERIALS AND METHODS

We used a typical 6-arm polypropylene anterior mesh (Albis; Fig. 2). After a routine placement of the four subvesical arms (2 distal and 2 middle arms), we deposited the 2 cranial arms in a tunelized space between the cervix and urinary bladder into the peritoneal cavity in the vaginal step (Fig. 3). Then, in the laparoscopic step, we stitched the mesh to the cervix and spreaded the both cranial arms laterally to the oblique muscle aponeurosis (Fig. 4) using the Dubuisson concept, instead of fixation to the sacral bone.

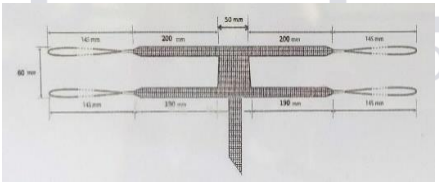

Fig. 1.

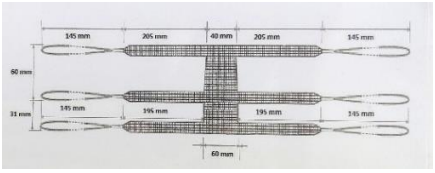

Fig. 2.

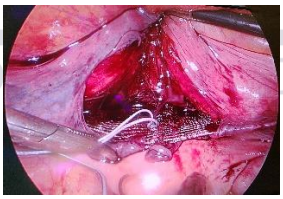

Fig. 3.

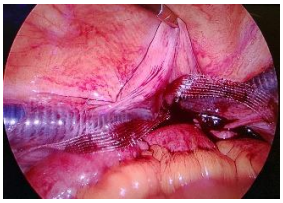

Fig. 4.

RESULTS

Postoperatively, both compartments were found to be optimally managed showing POP-Q score of 0. The operation was much easier and shorter to perform than anterior mesh placement followed by sacrohysteropexy, since the whole procedure took less than 1.5 hrs.

INTERPRETATION OF RESULTS

The presented technical refinement of laparoscopic uterus suspension with a 6-arm mesh seems fully functionally valid.

CONCLUSIONS

In patients presenting with both cystocele and uterine prolapse, we recommend a single mesh procedure. Combining Dubuisson's lateral uterosusupension with anterior compartment repair using a 6-arm mesh seems to be a feasible and time-sparing option with a reduced risk of complications for these patients.

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89 - MODIFICATION OF POSTMENOPAUSAL VAGINAL MUCOSA AFTER REPEATED CO2 LASER TREATMENT

Casiraghi Arianna, Ruffolo Alessandro Ferdinando, Degliuomini Rebecca Susanna, Parma Marta, Candiani Massimo, Salvatore Stefano

San Raffaele Hospital, San Raffaele Hospital - Vita Salute University, Milan, Italy

INTRODUCTION AND AIM OF THE STUDY

Genitourinary syndrome of menopause (GSM) is a condition affecting postmenopausal women. Signs and symptoms of GSM are present in more than half of postmenopausal women and significantly affect social and sexual life1. It is a condition caused by the drop of estrogen that occurs in women during menopause. Patients with GSM complain of vaginal burning, itching, dryness and dyspareunia, with a worsening of quality of life and sexual function. Fractional microablative CO2 laser represents a valid non-pharmacological alternative for the treatment of VVA. Laser CO2 safety and efficacy in ameliorating GSM symptoms have been evaluated in postmenopausal women with a maximum clinical follow up of 24 months and after a single cycle of treatment2. The aim of present study is to assess the long-term histological and clinical effects of MonaLisa Touch procedure for the management of Genitourinary Syndrome of Menopause (GSM) in postmenopausal female patients after repeated cycles of treatment.

MATERIALS AND METHODS

This is a prospective study carried out in the Urogynecology Unit of IRCCS San Raffaele Hospital, Milan, Italy between May 2019 and May 2020. We recruited postmenopausal women referred to our Urogynecology Unit for GSM. Each woman had previously performed 2 or 3 cycles of CO2 laser, each consisting of 3 sessions every 30-40 days. All patients were then re-treated with a further cycle of microablative CO2 laser system (SmartXide2 V2LR, Monalisa Touch, DEKA, Florence, Italy). A biopsy was taken from each patient before the first treatment (T0) and 4 weeks after the last treatment (T1). Histological examinations were carried out on all patients at baseline (T0) and one month after the last laser treatment (T1). Serial sections were stained with: Hematoxylin and Eosin (H&E) for general view and epithelial thickness measurements, Periodic Acid - Schiff reagent (PAS) for glycogen staining, Masson Trichromic for the identification of Collagen and immunohistochemical (IHC) procedure for the demonstration of CD34-positive (CD34+) cells in order to evaluate blood vessels in the connective tissue and inside newly formed papillae. The microscopic findings were correlated with the symptoms reported by the patients. Each woman was evaluated with The Female Sexual Function Index (FSFI) for sexual life; the Visual Analogic Scale (VAS) was used to assess the severity of vulvovaginal symptoms before the beginning of treatment (T0) and one month after the last treatment of CO2 laser (T1).

RESULTS

In this study we enrolled 15 postmenopausal women. A total of 13 patients who were enrolled in the study completed the treatment and returned to the 4-week follow up.

Table 2 show differences of the VHI and VAS Scale at baseline and at four weeks after last laser treatment.

At baseline 10/13 women (77.0 %) were sexually active; after a complete MLT cycle three women remained sexually inactive for personal choice.

Table 3 show differences of the FSFI Score at baseline and at 4 weeks after last laser treatment.

Table 4 show difference in urinary symptoms at baseline and after four weeks of follow up.

In Table 5 are compared objective morphometric data concerning structural modifications of vaginal mucosa, both in epithelium and in lamina propria before (baseline T0) and after 4 weeks of follow up (T1). (Fig. 1). No adverse effects were reported by any single woman in our population.

Mean (±SD)	Baseline (T0)	Follow up (T1)	p value
VHI	11.76 ± 2.08	16.46 ± 2.14	**0.003**
Prolapse Symptoms	0.76 ± 1.48	1.53 ± 2.02	0.147
Intercourse Sensitivity	4.23 ± 3.87	3.69 ± 3.22	0.383
Loss of air/water from the vagina	3.07 ± 2.92	1.30 ± 1.88	**0.043**
Dryness	5.30 ± 3.06	5.53 ± 2.75	0.968
Burning	4.30 ± 3.72	4.30 ± 3.85	0.905
Itching	2.15 ± 3.21	2.46 ± 2.98	0.380
Vaginal discharge	2.38 ± 2.87	1.92 ± 2.43	0.625
Dyspareunia	5.53 ± 3.35	5.23 ± 3.29	0.465
Dysuria	1.23 ± 2.48	0.84 ± 1.57	0.581

SD: standard deviation

Table 2. Vaginal health assessed with the Vaginal Health Index and Vulvovaginal symptoms assessed with a 0-10 Visual Analogue Scale.

Mean (±SD)	Baseline	Follow up	p value
Desire	2.72 ± 0.99	3.32 ± 0.75	**0.025**
Arousal	2.37 ± 1.52	3.23 ± 1.81	0.184
Lubrification	1.93 ± 1.65	3.13 ± 1.67	**0.012**
Orgasm	1.96 ± 1.79	3.41 ± 1.97	**0.012**
Satisfaction	2.23 ± 2.02	3.66 ± 1.69	**0.021**
Pain	1.72 ± 1.59	2.73 ± 2.02	**0.042**
Total Score	12.83 ± 8.37	19.10 ± 8.71	**0.034**

SD: standard deviation

Table 3. Sexual function assessed with the Female Sexual Function Index score (FSFI)

	Baseline	Follow up	p value
Epithelium			
Thickness (µm), mean ± SD	162.40 ± 62.43	219.42 ± 65.62	**<0.0001**
Number of cell layers, mean ± SD,	23.46 ± 5.26	30.46 ± 4.52	**<0.0001**
Number of para-basal cell layers, median (IQR)	2.0 (1.5-3.5)	2.0 (2.0-3.0)	0.964
Number of glycogen filled, median (IQR)	22.0 (12.0-25.0)	28.0 (22.0-31.0)	**0.002**
Papillae*, median (IQR)	2.0 (1.0-3.0)	4.0 (2.5.0-5.0)	**0.007**
Lamina propria			
Thickness of reticular collagen, mean ± SD	52.30 ± 19.21	78.46 ±19.93	**0.001**
Thickness of dense collagen, mean ± SD	360.0 (350.0-400.0)	350.0 (345.0-350.0)	**0.048**
Number of vessels (CD 34+), mean ± SD	15.08 ± 6.76	25.81 ± 10.53	**<0.0001**

SD: standard deviation; IQR: inter quartile range
* Evaluation scale: 1, 1, 2, 3, 4, 5

Table 5. Histological features

Mean (±SD)	Baseline	Follow up	p value
UDI-6	28.20 ± 18.09	22.75 ± 17.89	**0.040**
ICIQ-SF	6.07 ± 5.36	4.46 ± 3.97	**0.034**

SD: standard deviation

Table 4. Urinary distress assessed with the Urinary Distress Inventory (UDI-6) and the International Consultation on Incontinence Questionnaire Short Form (ICIQ-SF).

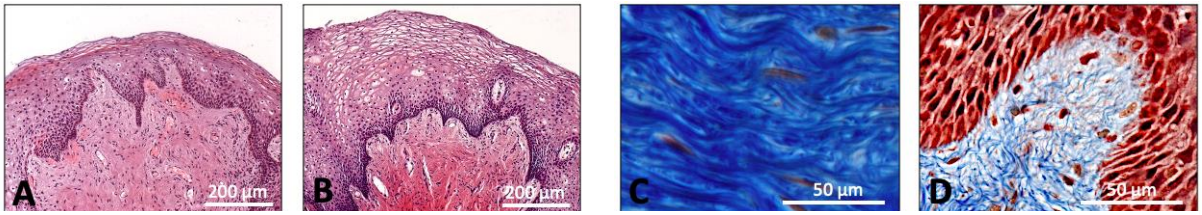

Figure 1
Hematoxylin and Eosin (A and B) for general view, the count of cell layers and the measurement of epithelial thickness.
Trichromic (Masson, C and D) for the evaluation of different collagens: dense collagen (C) in the most part of lamina propria in T0 samples, and reticular collagen (D) in the most superficial, subepithelial and papillary districts in T1 samples.

At baseline, vaginal mucosae tissues from all the patients who had underwent at regular yearly intervals 2 or 3 cycles of three CO2 laser treatments demonstrated to have already a good state of vaginal trophism for what concern epithelial thickness and vascularization. However, after an addictional cycle of microablative CO2 laser treatment, further overall improvements of main microscopic structural characteristics of the mucosa were noted.
In the epithelium we observed a statistically significant increase in the number of cell layers with a consequent increase in epithelial thickness, in the number of glycogen filled cells and in the number of papillae (Table 5 and Fig. 1 A and B).
In the lamina propria, the whole of the analyzed parameters have resulted improved after follow up, specifically thickness of reticular collagen and number of vessels were increased (Table 5 and Fig. 1 C and D). All of these morphological modifications were validated by statistical significance.
Furthermore neither signs of inflammation nor fibrosis were observed in all samples.
Clinically we observed an improvement in sexual and urinary symptoms confirming the utility of repeated annual laser treatment on objective and subjective measurement. Specifically we showed a significant improvement in vaginal health measured with the VHI with an increase in total elasticity, lubrication and trophism. We also highlighted a significant improvement in sexual health functioning measured with an increase in all FSFI fields as reported in previous studies.
Moreover we considered changes in urinary symptoms assessed with UDI-6 and ICIQ-UI. Either frequency, severity and impact on quality of life (QoL) of urinary incontinence and lower urinary tract symptoms (LUTS) resulted significantly improve after 3 laser sessions.

CONCLUSIONS

This is the first study that provides data to support that microablative CO2 laser treatment is associated with persistent long-term improvement of both histological and clinical characteristics related to Genitourinary Syndrome of Menopause and it is not associated with epithelial or lamina propria damage.

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90 - LONG-TERM OUTCOME OF PATIENTS WITH OASIS DELIVERED AT SVETI DUH UNIVERSITY HOSPITAL IN THE 3-YEAR PERIOD - BRIEF ANALYSIS BY TELEPHONE INTERVIEW

Prka Matija, Marton Ingrid, Habek Dubravko, Miletic Ivan Antonio, Dokozic Domagoj

Croatian Catholic University, Sveti Duh University Hospital, Zagreb, Croatia, Požega Genral County Hospital, Požega General County Hospital, Požega, Croatia, Sveti Duh University Hospital, Sveti Duh University Hospital, Zagreb, Croatia

OBJECTIVE
Brief analysis of the long-term outcome of patients with obstetric anal sphincter injuries (OASIS).

METHODS
In August 2021 we performed short telephone interview of patients with OASIS delivered in the tertiary referral center from 2013 to 2015, with focus on symptoms after OASIS, subsequent deliveries and actual pelvic floor status.

RESULTS
In the study period, annual episiotomy rates were 26.7%, 25.9% and 24.9%, while OASIS rates were 0.56%, 0.50% and 0.54%, respectively. Twenty-two out of 38 (57.9%) patients with OASIS participated in the study. …

CONCLUSIONS
From the total number of 22 patients, OASIS was diagnosed in 10 (45.5%) patients and all of them occurred in spite of performing mediolateral episiotomy. These results confirm that episiotomy is not a protective then a risk factor for OASIS. The average birth weight was 3680g and cannot be recognized as a risk factor for OASIS. Most frequently diagnosed was OASIS IIIA (13/22, 59.1%), than IIIB (6/22, 27.3%) and IIIC (3/22, 13.6%) respectively. Until the end of August this year, total number of vaginal deliveries after OASIS was 9/15 (60%), which clearly demonstrates that the majority of patients were asymptomatic or with minimal symptoms after previous OASIS. The incidence of major complications (anal and urinary incontinence (AI, UI) was relatively low. 2 patients who were suffering from AI were diagnosed with OASIS IIIC (9.1%) while UI was diagnosed in 6 patients (27.3%) and 5/6 were diagnosed with OASIS IIIA. We have investigated habits of all our patients and concluded that 11/22 (50%) is regularly practicing some kind of physical activity (mainly Kegel, gym and less frequently pelvic floor muscle training) which is acceptable. No one was under guided physiotherapy. Unfortunately, 11/20 (50%) is not practicing any kind of activity. In that particular group, almost 30% of patients had OASIS IIIC.

91 - THE IMPACT OF CYSTOCELE REPAIR ON URGE SYMPTOMS IN WOMEN WITH PELVIC ORGAN PROLAPSE

Pawel Szymanowski, Szepieniec Wioletta Katarzyna, Banach Paulina, Hanna Szweda

Andrzej Frycz Modrzewski Krakow University, Faculty of Medicine and Health Sciences, Cracow, Poland

INTRODUCTION AND AIM OF THE STUDY

Urinary urge symptoms, defined as a complaint of sudden, difficult to defer desire to pass urine, is a lower urinary tract dysfunction (LUTD) that affects millions of women of all ages 1 2. The disorder has a substantial influence on quality of life, as it not only affects patients' physical comfort, but also their psychological and social well-being. Those with the condition are thus at an increased risk of depression and limited social and sexual function 2 . As the prevalence of urge symptoms and urinary incontinence (UI) is increasing globally 3, finding adequate treatment strategies for the condition becomes one of the most important present-day aims for physicians.

The purpose of this study was to evaluate the impact of cystocele repair on urinary urge symptoms and to determine the likelihood that urge symptoms are caused by cystocele and therefore cured by cystocele repair. The secondary aim was to assess the impact of baseline cystocele stage POP on the improvement of urge symptoms following surgical treatment of POP.

MATERIALS AND METHODS

A total of 321 female patients with cystocele stages II, III or IV (POP), who underwent surgery for pelvic organ prolapse, were included. A retrospective analysis was performed to determine the presence of urge symptoms in patients with cystocele and to evaluate how many patients were cured from urge symptoms by the cystocele repair. Postoperative data were obtained by interview during a follow-up examination 6 weeks after surgery.

RESULTS

Preoperatively, 52.02% of all patients diagnosed with cystocele stages II, III or IV POP experienced urge symptoms. Urge symptoms were cured in 88.62% of patients with cystocele stages ≥ II after POP repair ($p < 0.005$). 88.60% of patients with cystocele stage II POP and 88.68% of patients with cystocele stages III to IV POP reported improvement in urge symptoms ($p < 0.005$). Despite cystocele repair, 11.4% of patients with preoperative cystocele stage II POP and 11.32% with preoperative cystocele stages III and IV POP reported persistent urge symptoms. 5.84% of the study group who showed no urge symptoms preoperatively, experienced de novo urge symptoms after following surgery ($p < 0.005$). Results are presents in Table 1.

Table 1 Changes in urge symptoms depending on POP severity

	CYSTOCELE			
URGE SYMPTOMS	POP 2,3,4 (n=167)	POP 2 (n=114)	POP 3,4 (53)	P-value
Cure	148 (88.62%)	101 (88.60%)	47 (88.68%)	0.806
Persistence	19 (11.38%)	13 (11.40%)	6 (11.32%)	0.806

INTERPRETATION OF RESULTS

Cystocele repair cured urge symptoms in the majority of patients. However, the severity of POP had no significant influence on the improvement in urge symptoms following cystocele repair. Risk of de novo urge symptoms after anatomical repair still needs to be explored.

CONCLUSIONS

Taking into account the high incidence of urge symptoms in women with POP, and very high cure rate regarding this type of LUTS with prolapse surgery, it can be inferred that disturbance of bladder anatomy due to POP is the cause of urgency. Thus, effective POP treatment, restoring the correct anatomical position of the bladder can be considered as a causal treatment of urgency in patients with concomitant POP and urgency.

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92 - MID-URETHRAL SLING IMPLANTATION EFFECT ON URGE COMPONENT IN STRESS PREDOMINANT MIXED URINARY INCONTINENCE

Telesz Aleksandra, Szweda Hanna, Szepieniec Wioletta Katarzyna, Banach Paulina, Pawel Szymanowski

Andrzej Frycz Modrzewski Krakow University, Faculty of Medicine and Health Sciences, Cracow, Poland

INTRODUCTION AND AIM OF THE STUDY

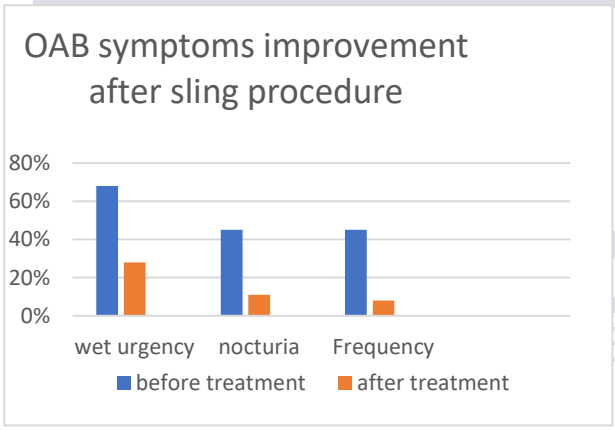
Urinary incontinence affects approximately 25-45% of women. About 10-20% of all patients diagnosed with UI reported mixed form of the disease. In stress predominant form of mixed UI, mid urethral sling implantation is the first line treatment. In presented study we evaluated the effect of suburethral sling implantation on the urge symptoms in patients with mixed form of the urinary incontinence.
Clinically we observed improvement in both, stress and urge component of UI in patients treated with midurethral sling. The aim of the study was to evaluate objectively the influence of a suburethral sling implantation on the urge symptoms in patients with mixed urinary incontinence (MUI) with predominant stress component.

MATERIALS AND METHODS

The study group was 220 woman with stress urinary incontinence (SUI). Among them 35 women with stress-predominant MUI, treated primary with suburethral sling implantation. In 85.7% (N=30) TOT surgery and in 14.3% (N=5) TVT surgery were performed. The clinical symptoms and Quality of Life (QoL) were evaluated before and after treatment using bladder diary and QOL questionnaire.

The study was approved by bioethical commitee.

RESULTS



Subjective improvement of urge symptoms was observed in 97.1% of women from the study group. 'Wet OAB' symptoms were reduced from 68.6% to 28.6% after sling procedure. Nocturia and pollakiuria were reduced from 45.7% to 11.4% and 8.6% respectively. Nocturia and pollakiuria de novo were observed in 2 (5.4%) and 1 (2.7%) patients respectively. After the sling procedure in 28.6 % (n=10) pharmacotherapy with solifenacin has been administered for 2-4 months. In 8.6% (n=3) intravesical injection of botulinum toxin was performed for persisting OAB symptoms.

INTERPRETATION OF RESULTS

Midurethral sling implantation is a method dedicated for stress urinary incontinence treatment. However, improvement in SUI component in women with mixed form of incontinence is probably an important part of bladder training furtherly influencing the urge component of MUI. Women are more self confident when knowing that the risk of passing urine is very low after surgery, and then , when experiencing the urgency they are able to overcome the feeling. What is more, the dry urgency is easier to accept than wet urgency, and is significantly less bothersome for women.

CONCLUSIONS

Suburethral sling implantation in woman with stress- predominant MUI, although dedicated to treat SUI symptoms, improves also the urge component of MUI. In majority of patients no further treatment is necessary for OAB symptoms.

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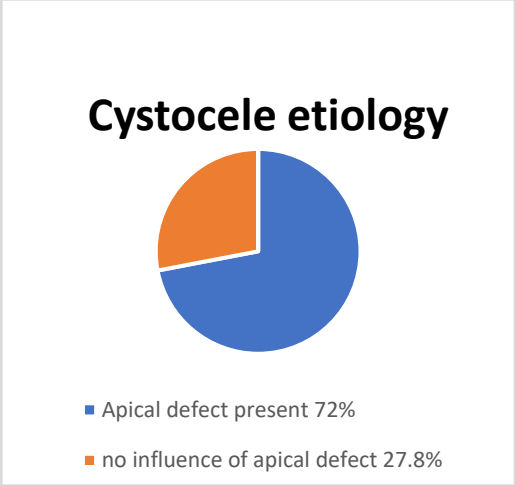
93 - RECURRENCES AFTER CYSTOCELE SURGICAL TREATMENT

Szymanowski Pawel, Szepieniec Wioletta Katarzyna, Banach Paulina, Szweda Hanna

Andrzej Frycz Modrzewski Krakow University, Faculty of Medicine and Health Sciences, Cracow, Poland, Andrzej Frycz Modrzewski Krakow University, Faculty of Medicine and Health Sciences, Warszawa, Poland

INTRODUCTION AND AIM OF THE STUDY

Pelvic Organ Prolapse (POP) is diagnosed in about 50% of women during the gynecological examination. However, it is symptomatic in less than 10% and the life risk of surgery need for POP reaches about 13%. Regrettably, even 50% of women experience recurrence with need of reoperation. Inadequate diagnosis leading to inappropriate choice of the surgery technique seems to be the cause of high POP recurrence rate . Treatment strategy is considered effective when it is performed accurately to the pelvic floor structure defect. Therefore, to diagnose various defects of POP is needed for a proper surgery qualification and thua, effective treatment.



Detailed assessment of pelvic floor shows that in over 70 % of POP cases the sole or concomitant cause of the cystocele is a defect of sacrouterine ligaments, known as the apical defect (Level I according to De Lancey's classification). On the other hand, the most common surgery for cystocele is anterior colporraphy, that should be performed as the correction of level II central defect. Level II central defect is, in turn, the rarest types of defect causing cystocele.

Presented study evaluates effectiveness of the surgical treatment after a proper qualification based on the level of particular pelvic floor structures defect

MATERIALS AND METHODS

We evaluated 311 cases of patients with cystocele. In 27.97 % the only cause of the disorder was the apical defect. In 36.01 % the only cause was level II defect- in 7.40% of the cases it was central defect, in 28.62% of the cases it was lateral defect. Then, we qualified patients to surgery basing on the strategy presented in the table below

TYPE OF CYSTOCELE	% of patients	number of patients	SURGERY TECHNIQUE	
Sole apical defect	27.97	n=87	Sacropexy or Dubuisson suspension, alternatively,	**Apical defect is present in 72% of patients**
Mixed cystocele level I/ level II lateral defect	28.62	n=89	if the extention of the cystocele after level I repair was POP Q II or more additional lateral repair or anterior colporraphy depending of the kind of defect at level II	
Mixed cystocele level I/ level II central defect	7.40	n=23		
Lateral defect , level II	28.62	n=89	Lateral repair or anterior mesh in special cases	**Less than 27.8 % with no level I defect have influence on POP**
Central defect , level II	7.40	n=23	Anterior colporraphy	

The detailed examination is based on localisation, type (according to De Lancey's classification) and stage of the defect (according to POP Q scale). When the apical defect coexists with a cystocele, the level II is assessed after the reposition of level I with the speculum. If the cystocele is satisfactorily reduced, leading apical defect is diagnosed. If the extension of the cystocele is getting smaller after reposition of level I, concomitant(mixed) defect is diagnosed and treated appropriately. All the patients were assessed at least one year the cystocele surgery.

RESULTS

In minimum one follow-up period, we found 1.61% (n= 5) of recurrence, and 8.36% (n=26) of de novo defects in patients, who underwent cystocele surgery.

RESULTS INTERPRETATION

Considering the type of the defect is indispensable in qualification to surgery. Surgical techniques, focusing precisely on defect reconstruction is of crucial importance to reach low recurrence rate. Appropriate qualification and surgical

treatment focused on the defect of pelvic floor structures leads to significant improvement of the treatment results. Having in mind the pivotal apical defect role in cystocele etiology changes significantly the diagnosis and has an influence on the therapeutic decisions and surgical treatment strategy.

CONCLUSIONS

A proper qualification for surgery, with the assessment of defect's level and type, is essential for recurrence rate minimization in treatment of a cystocele.

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94 - THREE DIMENSIONAL URETHRAL PROFILOMETRY – REPEATABILITY OF THE METHOD.

Hanna Szweda, Wioletta Katarzyna Szepieniec, Maksym Wroblewski, Pawel Szymanowski

AFM Krakow University, Department of Gynecology and Obstetrics, Krakow, Poland, Medical University of Warsaw, Univerisity Clinical Center, Warsaw, Poland

INTRODUCTION AND AIM OF THE STUDY

Three dimensional urethral profilometry is a method of complex functional assessment of the urethra. The idea extrapolated from rectal manometry , using dedicated software and five lumen catheters allows for complex evaluation of urethral pressure, with three dimensional reconstruction of the urethra, which is easy for interpretation. Technique, patients discomfort , examination time and cost is comparable to classical profilometry, while the amount of the data that can be obtained is incomparably bigger. As urethral profilometry is seen as a method of poor repeatability, the aim of our study is to investigate the repeatability of the three dimensional profilometry.

MATERIALS AND METHODS

40 urethral profiles in patients with different lower urinary tract symptoms were performed, every test was repeated twice in the same patient. In the first group of patients 20 examinations were performed by the same specialist, and in the second group of 20 patients examinations were performed by two examiners in 30 min interval.The collected data was analyzed by a statistician. Urethral parameters analyzed are presented in Table 1. All the parameters were analysed for individual channels and average values.

-maximal urethral pressures
-average urethral pressures
-functional length of the urethra
-length to maximal urethral pressure point
-vector volume

RESULTS

Measurement deviations in pressure assessment less than 5 cmH20 [<5% of full measurement range] are accepted as resulting from the device settings and are clinically negligible. Similarily, for lenght measurements, deviations <5mm , for area measurment deviations less than 15 J/m2 and vector volume less than 50000 cmH2O2*mm ale due to the device settings and are clinically insignificant and negligible. In the table below (Table 1) standard deviations and percentage differences between measurements are presented. Depending on the parameter considered, from 67% to 100% of the records differed in less than 5%. What is more, the three dimensional recontructions of pressures distribution are comparable and compatible (Fig 1).

***P_ura max** (maximum urethral pressure measured in relation to marker F2)*:	Study group [N=37]		Method repeatibility group [N=19]		Inter-operator repeatibility group [N=18]	
	cmH_2O	*%*	*cmH_2O*	*%*	*cmH_2O*	*%*
SD	**8,17**	**15,339**	**10,22**	**20,08**	**5,05**	**6,95**
	N	*%*	*N*	*%*	*N*	*%*
Number of records with SD <1	**31**	**83,78**	**16**	**84,21**	**14**	**77,78**
Number of records with deviation less than 5%	**25**	**67,57**	**13**	**68,42**	**13**	**72,22**
***P_ave** (average urethral pressure)*:	Study group		Method repeatibility group [N=19]		Inter-operator repeatibility group [N=18]	
	cmH_2O	*%*	*cmH_2O*	*%*	*cmH_2O*	*%*
SD	**4,30**	**15,620**	**5,50**	**20,72**	**2,2594**	**6,0502**
	N	*%*	*N*	*%*	*N*	*%*
Number of records with SD <1	**31**	**83,78**	**16**	**84,21**	**13**	**72,22**
Number of records with deviation less than 5%	**33**	**89,19**	**16**	**84,21**	**17**	**94,44**
L_p max (lenght from internal urethral orifice to P ura maxpoint)	Study group		Method repeatibility group [N=19]		Inter-operator repeatibility group [N=18]	
	cm		*cm*		*cm*	
SD	**0,36**		**0,50**		**0,13**	
	N	*%*	*N*	*%*	*N*	*%*
Number of records with SD <1	**30**	**81,08**	**15**	**78,95**	**14**	**77,78**
Number of records with deviation less than 5%	**33**	**89,19**	**15**	**78,95**	**18**	**100,00**
***TLS** (total length of the sphincter)*:	Study group		Method repeatibility group [N=19]		Inter- operator repeatibility group [N=18]	
	cm		*cm*		*cm*	
SD	**0,67**		**0,91**		**0,23**	
	N	*%*	*N*	*%*	*N*	*%*
Number of records with SD <1	**34**	**91,89**	**17**	**89,47**	**14**	**77,78**
Number of records with deviation less than 5%	**31**	**83,78**	**14**	**73,68**	**17**	**94,44**
***Area (area under the profile plot)**[J/m^2]*:	Study group		Method repeatibility group [N=19]		Inter- operator repeatibility group [N=18]	
	J/m^2		*J/m^2*		*J/m^2*	
SD	**10,28**		**12,00**		**7,48**	
	N	*%*	*N*	*%*	*N*	*%*
Number of records with SD <1	**23**	**62,16**	**10**	**52,63**	**15**	**83,33**
Number of records with deviation less than 5%	**32**	**86,49**	**15**	**78,95**	**17**	**94,44**
***VV**: [cmH_2O^2*mm] (vector volume)*	Study group		Method repeatibility group [N=19]		Inter-operator repeatibility group [N=18]	
	*cmH_2O^2*mm*		*cmH_2O^2*mm*		*cmH_2O^2*mm*	
SD	**22359,79**		**26889,72**		**15701,06**	
	N	*%*	*N*	*%*	*N*	*%*
Number of records with SD <1	**33**	**89,19**	**17**	**89,47**	**13**	**72,22**
Number of records with deviation less than 5%	**35**	**94,59**	**17**	**89,47**	**18**	**100**

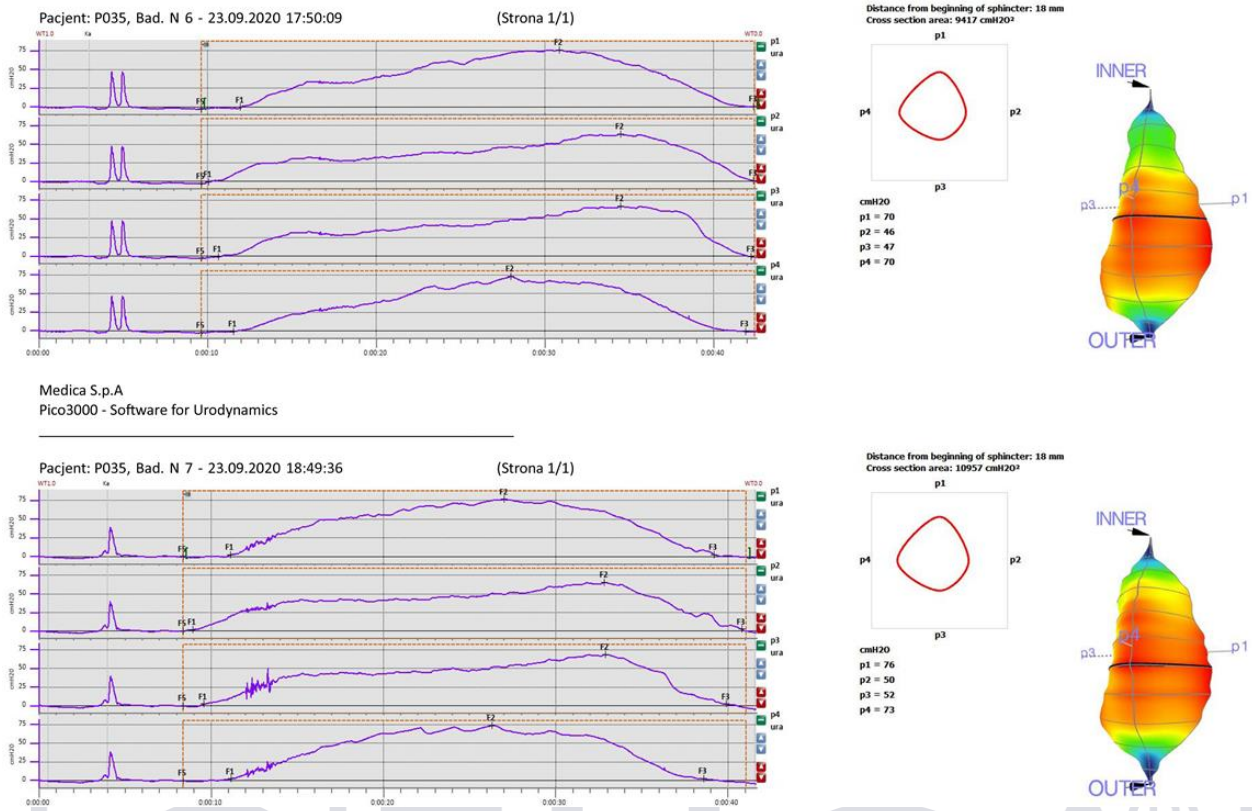

Fig 1 – Comparison of two measurements

INTERPRETATION OF RESULTS

It is assumed that the deviations of the measurements values up to 5% are within the measurement error and are negligible. Repeatability of the functional examinations, such as urethral profilometry is influenced by many factors,aming which are the patients movements, muscles tonus changes, patients relaxation or tensity. Taking all this factors into account, variability of the measurement values in presented study, which is generally less than 5% three dimensional profilometry can be considered as a method with good repeatability.

CONCLUSIONS

Three dimensional profilometry is a valuable method of global urethral pressures assessment. Complexity of the methot is comparable with classical profilometry, the amount of data collected is significantly greater, and data is easy to interpret thanks to three dimensional, movable reconstructions of the urethra.
It seems that high repeatability is another advantage of the method.

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95 - THE IMPACT OF MID-URETHRAL SLING SURGERY FOR SURGICAL TREATMENT OF STRESS URINARY INCONTINENCE ON HIP JOINT FUNCTION

Herman Amir, Yohay Zehava, Yohay David, Eshkoli Tamar, Serhan Bilal, Weintraub Adi, Hasan Mahmod

Department Of Obstetrics And Gynecology, Soroka University Medical Center, Faculty Of Health Sciences, Ben-Gurion University Of The Negev, Beer Shevaa, Israel, Department Of Orthopedic Surgery, Assuta Ashdod Medical Center, Faculty Of Health Sciences, Ben-Gurion University Of The Negev, Ashdod, Israel, Soroka Medical Center, Soroka Medical Center/ Ben Gurion Unevirsity, Beer Shevaa, Israel, The Stanley Steyer School Of Health Professions, Faculty Of Physical Therapy, Tel Aviv Unevirsity, Tel Aviv, Israel

OBJECTIVE

Transobturator tape (TOT) is a common surgical procedure aimed at treating stress urinary incontinence (SUI). This surgery is performed by placing a mesh sling under the urethra while passing through the obturator foramen bilaterally. Due to the proximity to muscular structures in the hip and thigh, a common complication of this surgical procedure is pain in the groin and legs. To date, little is known about the effect of this surgery on the range of motion and joint function of the hips. We aimed to examine whether there is a change in the range of motion and function of the hip joint after TOT in women treated for SUI.

METHODS:

This was a prospective cohort study that examined women over the age of 18 who underwent TOT due to SUI or stress-predominant mixed incontinence. We evaluated range of motion and joint function before surgery and 8-12 weeks after surgery by measuring the ranges of the hip joint in both legs using a Genumeter. In addition, muscle strength of the hip joint muscles was tested using Manual muscle testing, and we tested walking function using the Time Up and Go test (TUG) and the 10 Minute walk test (10MWT). Both tests, TUG and 10MWT, were used to examine the objective clinical impact of surgery on gait function, by evaluating the change in time performing walking tasks before and after surgery.
We also conducted various questionnaires to examine the subjective effect of the surgery on patients' quality of life. Two questionnaires examined pelvic floor function and urinary incontinence (UDI6 and IQ7), while the 12-Item Short Form Survey (SF12) examined mental and physical quality of life and the Forgotten Joint Score (FJS) questionnaire examined the ability of the patient to forget having a problem with a joint after surgery. All tests and questionnaires were examined before and after surgery. Paired data were compared using the paired sample t-test, after testing for normal distribution. All reported P values are two sided.

RESULTS:

During the study period, 37 women were recruited, of these 32 completed the follow-up examination. The average age of the study population was 59.9 years; 71.9% of the women were urban dwellers and 68.8% of the women were menopausal (see table *1*).
Following surgery, a significant deterioration in the range of motion of the hip joint was noted (Table 1). There was also a significant deterioration in the muscle strength of muscles that move the hip joint and are located near to the tape passage as compared to those that were not close to the tape passage (Table 2).
The pelvic floor function and quality of life questionnaires demonstrated a significant improvement following surgery. In contrast to range of motion and hip joint function, no significant change was noted in walking speed following surgery according to the TUG and the 10MWT test.

CONCLUSIONS*:*

In the short term (8-12 weeks post-surgery), a change in the range of motion and hip joint function was demonstrated after a TOT due to SUI or stress-predominant mixed incontinence. In addition, we found a significant change in the muscle strength of the muscles that are closely located to the passage oof the tape. Further studies are needed to examine the long-term effects of surgery on the range of motion and hip function as well as whether women can benefit from interventions such as physical therapy following surgery.

Table 1: Hip range of motion in women before and after undergoing a TOT due to SUI or stress-predominant mixed incontinence

Right hip	**Mean range of motion before TOT (degrees)**	**Mean range of motion after TOT (degrees)**	**Mean change in range of motion (difference in degrees)**	**P value**
Extention	*(1.2 ±) 19.06*	*16.09(±1.1)*	*2.97 (1.29±)*	*0.029*
Flexion	*(±2.14) 108.25*	*99.72 (± 2.9)*	(2.32 ±) *2.53*	*0.001*
Internal Rotation	*35.97 (± 1.47)*	*31.97 (± 1.47)*	*4 (± 1.38)*	*0.007*
External Rotation	*28.97 (± 1.33)*	*26.22 (± 1.17)*	*2.75 (± 0.93)*	*0.006*
Left hip	**Mean change in range of motion (difference in degrees)**	**Mean range of motion after TOT**	**Mean change in range of motion (difference in degrees)**	**P value**
Extention	*(± 1.19) 18.63*	*15.84 (± 1.14)*	*2.78 (± 1.09)*	*0.016*
Flexion	*(± 2.39) 107.97*	*(± 3.06) 97.81*	*(± 2.37) 10.16*	*0.000*
Internal Rotation	*(± 1.33) 37.16*	*(± 1.19) 34.97*	*(± 1.32) 2.19*	0.107
External Rotation	*(±1.41) 26.69*	*(± 1.11) 23.25*	*(± 1.18) 3.43*	*0.006*

Table 2: Muscle strength in women before and after undergoing a TOT due to SUI or stress-predominant mixed incontinence

Right hip	**Muscle strength before TOT**	**Muscle strength After TOT**	**Change in muscle strength**	**P value**
Flexion	*(± 0.093) 4.76*	*(± 0.13) 4.55*	*(± 0.19) 0.22*	*0.075*
Abduction	*(± 0.066) 4.83*	*(±0.09) 4.72*	*(± 0.99) 0.11*	*0.28*
Adduction	*(± 0.05) 4.91*	*(± 0.09) 4.72*	*(± 0.09) 0.19*	*0.05*
Left hip	**Muscle strength before TOT**	**Muscle strength After TOT**	**Change in muscle strength**	**P value**
Flexion	*(± 0.08) 4.72*	*(± 0.13) 4.78*	*(±0.13) 0.23*	*0.07*
Abduction	*(± 0.07) 4.86*	*(± 0.09) 4.72*	*(± 0.11) 0.14*	*0.2*
Adduction	*(± 0.05) 4.9*	*(± 0.11) 4.66*	*(± 0.09) 0.25*	*0.009*

96 - COVID-19 AND UROGYNECOLOGIC SERVICES: A RETROSPECTIVE TWO-YEAR ANALYSIS OF A TERTIARY CENTER IN GERMANY

Nigdelis Meletios P., Kordari Maria, Sklavounos Panagiotis, Solomayer Erich-Franz, Palla Viktoria-Varvara

Saarland University Hospital, Department of Gynecology, Obstetrics and Reproductive Medicine, Homburg/Saar, Germany

INTRODUCTION AND AIM OF THE STUDY

A number of scientific papers have attempted to provide guidance regarding the provision of urogynecologic services in the coronavirus pandemic (COVID-19) era. Still, primary data, quantifying the effect of the pandemic on the attendance of urogynecologic services, remain scarce. We conducted a retrospective analysis of cases of a urogynecology outpatient department at a university hospital between 2019 and 2020, in an attempt to identify clinical practice differences attributable to the pandemic.

MATERIALS AND METHODS

In total 269 and 253 patients attending our department in 2019 and 2020, respectively, were included in the study. Baseline data, risk factors for COVID-19 infection (namely hypertension, diabetes mellitus, other comorbidities) and information on treatment (cause, visit numbers, planning of an operation, conducting of the operation) were retrieved using the electronic record system of our hospital. Data were exported by two independent researchers in a predefined Excel file. Baseline statistics were conducted. The Mann-Whitney test was used for analysis of continuous data and chi-squared test for qualitative variables. Analyses were conducted using Jamovi (Version 1.8.4.0).

RESULTS

Both groups were comparable in terms of age, weight, height, hypertension, diabetes and other comorbidities. In total, 444 visits were conducted in 2019 and 460 in 2020. The number of visits per patient did not differ between the two years ($p = 0.06$). Prolapse was the most common cause of visit in both years. Finally, even though the number of operations planned did not differ statistically (130 in 2019 vs. 104 in 2020, $p = 0.08$), the number of operations conducted in 2019 was greater compared with 2020 (106 vs. 79, respectively, $p = 0.04$).

INTERPRETATION OF RESULTS

Even though the number of patients attending the outpatient urogynecology department was similar, the number of operations conducted was different between the two years. This difference could be attributed to the effects of the COVID-19 pandemic.

CONCLUSIONS

This retrospective analysis did not demonstrate differences in patient attendance. Nevertheless, the number of operative procedures conducted was significantly reduced.

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97 - ROLE OF AGING IN THE ONSET OF PELVIC FLOOR DISORDERS IN ANIMAL MODELS

Scatigno Annachiara Licia, Belli Giacomo, Sosso Cecilia, Arrigo Anna, Gritti Andrea, Dominoni Mattia, Gariboldi Fulvio, Bergante Carola, Visonà Silvia Damiana

University of Pavia, IRCSS Policlinico San Matteo/University of Pavia/Department of Public Health, Experimental and Forensic Medicine/Unit of Legal Medicine., Pavia, Italy, University of Pavia, IRCSS Policlinico San Matteo/University of Pavia/Department of woman's and child's health, Unit of Obstetrics and Gynecology, Pavia, Italy

INTRODUCTION AND AIM OF THE STUDY

Pelvic organ prolapse (POP) is defined as downward displacement of pelvic organs, that is their herniation into or through the vagina. It affects many women and contributes significantly to a decrease in their quality of life: indeed its principal symptoms include urinary and/or fecal incontinence, sexual dysfunction and dyspareunia.
To better understand POP pathophysiology, prevention and treatment, a large number of researchers recurred to animal models.
Since POP mainly affects postmenopausal and older women, the aim of this systematic review was to provide an overview of literature on the possible biomechanical changes that occur in POP animal models' vagina and its supportive structures as a consequence of aging.
Could aging favor the onset of these pelvic floor disorders in humans too?

MATERIALS AND METHODS

In order to realize this review of literature the most significant medical databases were consulted and all papers published online from 2000 until May 2021, including reports, case series, and retrospective or prospective trials, were considered. Eligible studies were those in which POP was studied in animal models and particular attention was paid to articles reporting the effects of aging on the microscopic structure of vagina and pelvic ligaments.

RESULTS

Most research about the possible effects of aging on vagina and its supportive system has been conducted on rodents: they are a preferred model when evaluating connective tissue support because their vagina structure is well characterised and similar to those of humans. Furthermore, they are cost effective, easy to work with a large number and afford to work with transgenic knockout animals.
The main findings concern protein structures of the connective tissue, known as elastin and collagen.
For what concern elastin, most authors observed a downregulation of elastin expression [1]; only in one case authors do not detect any differences in the amount of elastin caused by aging, but a change in its structure that seems to be more tortuous, porous and frayed.
Moving to collagen, the main extracellular components of the genitourinary system are collagen I, which provides strength and rigidity, and collagen III, which is more malleable and flexible. While some authors observed an increased expression of collagen I and a decreased expression of collagen III as a consequence of aging [2], other authors detected that aging could decrease collagen I expression [3].

INTERPRETATION OF RESULTS

The remodeling of the connective tissue affects the mechanical integrity of the vagina and its supportive tissue but it is difficult to detect the histological changes of elastic fibers related to aging in animal specimens, first of all because animals have a limited life span compared to humans.
Moreover there is a significant disagreement in literature about elastin and collagen quantitative changes related to aging.
Instead, it seems to be clear that aging affects elastin and collagen properties leading to aberrant forms which may affect the elasticity and resilience of tissue, arranging women to pelvic floor disease, such as POP.

CONCLUSIONS

The analysis of histological changes of the pelvic floor tissues related to aging underline how these topics appear not fully understood yet. These assessments are even more complex and controversial if applied to the role of the aging on the pathophysiology of POP.
More research is necessary.

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98 - VALUE OF ANAL CANAL LENGTH AS A RISK FACTOR FOR ANAL INCONTINENCE IN WOMEN

Oteros Rodríguez Beatriz, Vélez Vintimilla Ana Paula, Carmona Ruiz Anna, Tarragó Grima Mercè, Huguet Galfré Eva, Pessarrodona Iser Antoni, Porta Roda Oriol, Cassadó Garriga Jordi

Mútua Terrassa University Hospital, Pelvic floor unit of Gynecology department, Terrassa, Spain

INTRODUCTION

The prevalence of anal incontinence in women ranges from 1.6 to 6.2% depending on age1. This dysfunction represents a significant impairment in the quality of life of these women.

Among the risk factors, pregnancy and especially vaginal delivery assume an important role in the origin of this pathology. The anal sphincter injury that occurs during vaginal delivery seems to be one of the main causes of anal incontinence, but it is not the only one. Due to its relevance, more and more efforts are focused on the protection of the sphincter during vaginal delivey and on the identification and intrapartum repair of the sphincter in case of injury. Unfortunately, a not insignificant percentage of sphincter injuries go undetected.

Currently, the gold standard for diagnostic imaging of sphincteric lesions is endoanal ultrasound. With the emergence of three-dimensional ultrasound in gynecology, there are increasing publications on the role of transperineal ultrasound in the diagnosis of sphincteric lesions. This approach has the advantage of offering greater comfort in exploration. We now know that transperineal ultrasound is a good screening tool, since the absence of lesion correlates highly with endoanal ultrasound2. Some authors even point to the excellent correlation between both approaches in the detection of sphincteric lesions2.

However, the origin of anal incontinence is multifactorial. Another risk factor which has been studied is the length of the anal canal: thus, a shorter length would increase the risk3. This variable, although less studied than the previous one, is also easily measurable by transperineal ultrasound. But even though it is easy to measure, we know that the most important elements of continence are actually the two sphincters, not the canal, and these are difficult to measure because their anatomical configuration is not the same on the anterior wall as on the posterior wall. For this reason, it seems reasonable, due to its simplicity, to use the measurement of the anal canal as a whole from two very specific points: the anus and where the angulation of the canal begins (anorectal angle), as an objective measure of anal continence. But this raises a question: is the length of the anal canal "per se" a risk factor for anal incontinence independent of sphincteric injury?

We present this study in patients consulting at the pelvic floor unit without a medical history of OASIS (Obstetric Anal Sphincter Injury), in which the length of the anal canal is evaluated by transperineal ultrasound as a risk factor for clinical anal incontinence.

OBJECTIVE

To evaluate by transperineal ultrasound the length of the anal canal as an independent risk factor for anal incontinence in a population consulting for pelvic floor dysfunction.

MATERIAL AND METHODS

This is a retrospective study from the database of our pelvic floor unit including all women who consulted from December 2019 to June 2021 for any pelvic floor dysfunction, without having referred any previous anal sphincter repair.

Epidemiological variables (age, body mass index -BMI-, parity, instrumented deliveries, fetal weight) and clinical variables (reason for consultation, staging of prolapse according POP-Q system, affected compartment) were recorded in the database. A patient was considered to have anal incontinence if she answered affirmatively to questions 42 or 43 of the EPIQ questionnaire. The evaluation of the anal sphincter and the length of the anal canal was performed by transperineal ultrasound (Voluson GE E8 and E10), by TUI (Tomographic Ultrasound Imaging) displaying axial slices of the anal canal. The length of the anal canal was estimated ultrasonographically by measuring in the upper left image (corresponding to the anal canal in its length) from the anus to the point where the anal canal is angled (anorectal angle) (Figure 1). To analyse the interobserver reproducibility of this measurement, 20 cases were assessed by two different observers. The external anal sphincter was analyzed according to Guzman described, being considered injured if in the 8 axial tomographic slices of the anal canal (discarding the first one - cut at the level of the anus where there is still no internal anal sphincter - and the last one - junction of the external anal sphincter to the puborectalis muscle -) there was an affectation of at least 4 slices with a gap of more than 30º (Figure 2 and Figure 3).

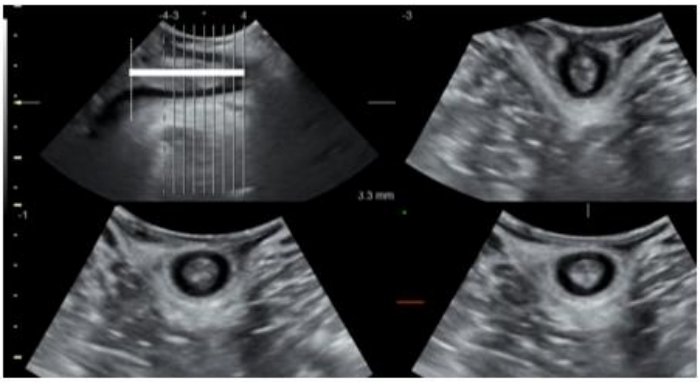

Figure 1: Measurement of the length of the anal canal (white line). The calculation is performed from the anus to the point where the anal canal angles (anorectal angle). The dashed line shows where the anorectal angle begins.

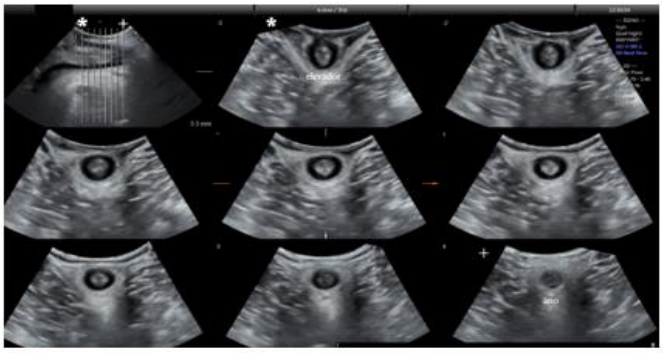

Figure 2: intact anal sphincter. The first external slice corresponds to the anus (+) and the most internal corresponds to the junction of the external anal sphincter with the levator puborectalis fascicle.

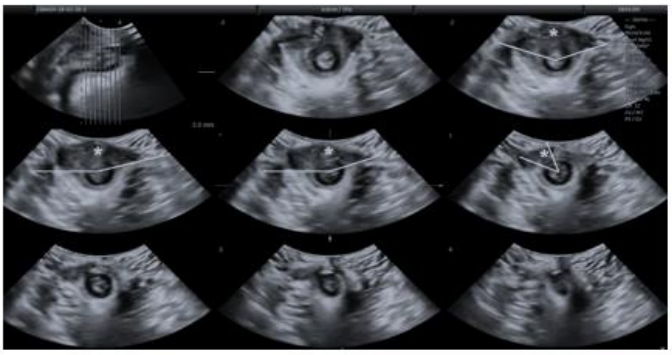

Figure 3: injured external anal sphincter. The image shows with an asterisk the 4 injured tomographic slices with an angle of injury greater than 30º.

The data were analyzed with the statistical software STATA15.1 (1985-2017 StataCorp LLC, Texas). A descriptive study was performed and results were expressed as means and standard deviation for continuous variables and as percentages for categorical variables. A univariate study was performed to analyze variables associated with anal incontinence using Student's t-test for continuous variables and Chi-square for categorical variables. If necessary, nonparametric tests (U-Mann Whitney, F Fisher) were used. Logistic regression was applied to study the variables independently associated with anal incontinence: introducing into the model those variables that showed statistical significance in the univariate study and forcing the entry of those that were considered clinically relevant. The analysis of interobserver reproducibility was done using the Intraclass Correlation Coefficient.

RESULTS

A total of 200 volumes were analysed. The characteristics of the study population are shown in Table 1.

Variables	
Age	57.78 years (12.81) *
BMI	27.05 (5.63) *
Instrumental deliveries	31.5%
Vaginal deliveries	1.99*
Higher fetal weight	3467.85 g (615.45) *
Age at first delivery	26.16 years (5.71) *
Anesthesia	59%
Anal incontinence	10.5%
Levator ani avulsion	38.38%
Hiatus Valsalva area	26.25 cm2 (9.41) *
POPQ ≥ 2	15.15%
POPQ ≥ 3	16.67%

POPQ ≥ 4	8.08%
Sphincter injury	6.5%
Anal canal	3.42cm (0.63) *

Table 1: epidemiological and clinic characteristics of the sample. *Mean and standard deviation.

In our sample we detected 6.5% of cases with anal sphincter lesion. The mean of anal canal lenght was 3.42cm +/- 0.63cm with an ICCa of 0.93 and ICCc of 0.96, which means an excellent reproducibility.

A univariate analysis was performed with the anal canal length as a risk factor for anal incontinence, and it was not statistically significant with an OR of 0.7 (p=0.343). We only found that sphincter injury was statistically significant with an OR of 4.44 (p=0.022) among all of the epidemiological and clinical studied variables.

In the multivariate analysis, sphincter injury was included because it was statistically significant, and the anal canal length was forced into the analysis because of the clinical relevance that some authors attribute to it. The result of this analysis is shown in Table 2 and only sphincter injury remains statistically significant as a risk factor for anal incontinence.

	OR	p
Sphincter injury	**4.12**	**0.032**
Canal anal	0.78	0.511

Table 2: multivariate analysis.

CONCLUSION

The length of the anal canal assessed by transperineal ultrasound, despite being an easy and reproducible measurement, does not seem to be a risk factor for anal incontinence in the cohort of patients studied.

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99 - DYNAMIC FUNCTION OF TENSION-FREE VAGINAL TAPES IN INCONTINENCE SURGERY EVALUATED BY 3D-4D ULTRASOUND

Vélez Vintimilla Ana Paula, Oteros Rodriguez Beatriz, Márquez Muñoz Estela, Huguet Galofré Eva, Carmona Ruiz Anna, Pessarrodona Isern Antoni, Porta Roda Oriol, Cassadó Garriga Jordi

Mútua Terrassa University Hospital, Pelvic floor unit of ginecology department, Terrassa, Spain

INTRODUCTION

Suburethral tension-free tapes, which are considered the gold standard treatment in stress urinary incontinence, have changed the way of understanding many aspects of the pathophysiology of this condition.
The aim of this technique is to improve the extrinsic mechanisms of continence by reducing the urethral mobility1,2 .
However, despite the excellent outcomes, tension-free tapes are not exempt of complications such as: bladder injury, pain, tape extrusion or voiding dysfunction.
Ultrasound imaging is an important tool in the assessment of all these complications. In the past few years two-dimensional ultrasound has allowed us to observe the dynamic response of the tapes, relating aspects as the shape, the pathway to the obturator foramen or the distance to the urethral lumen with clinical outcomes3.
Even so, it is difficult to make clinical decisions as remove or cut a tape based on the two-dimensional image. Considering this, we wondered whether three-dimensional dynamic ultrasound (3-4D US) could be an added value to make decisions in cases with complications after this kind of surgery.
However, we need to know how the tape works in the continent patient: Do the tapes angulate during the Valsalva maneuver or do they flatten out, and what happens during the contraction maneuver? We present this pilot study to answer all these questions.

OBJECTIVE

To assess, by3-4D transperineal ultrasound, the dynamic function of tension-free vaginal tapes after Valsalva and contraction maneuvers and its relationship with the urethra in patients who have improved from stress incontinence.

MATERIAL AND METHODS

This work is the preliminary data of a prospective study which assess the correlation of transperineal 2-3-4D ultrasound variables with postsurgical symptoms and quality of life questionnaires (ICIQ-SF and EPIQ).
Patients with stress incontinence who were candidates for anti-incontinence surgery (associated or not with POP) were recruited for the study. Patients with previous pelvic surgery were excluded. All patients underwent transobturator surgery (in-out or out-in).
During the first visit, an anamnesis, clinical examination using POP-Q, transperineal pelvic floor ultrasound (GE Voluson E10), urodynamic study and the filling out of the ICIQ-SF and EPIQ questionnaires were performed.
Clinical examination, ultrasound and questionnaires were repeated 15 days and three months after surgery.
Transperineal ultrasound was performed with an empty bladder (post-void). The variables reported in this preliminary study were:

- The angle in the three-dimensional axial plane described by the two arms of the tape from the obturator foramen to the suburethral point of the tape (angle α) at rest (Fig. 1), Valsalva (Fig. 2) and contraction.
- The distance in the axial plane from the tape to the urethral lumen (Fig. 1 and 2).

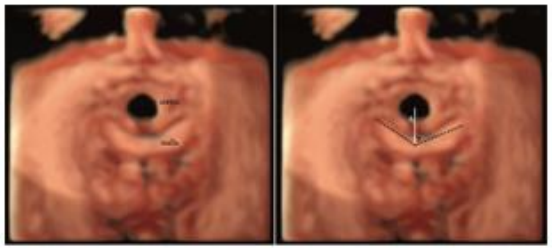

Figure1 Tape at rest in the axial plane. The image on the left shows the urethra and the tape. In the image on the right we can see the calculation of the tape-lumen distance (A) and the angle α (B)

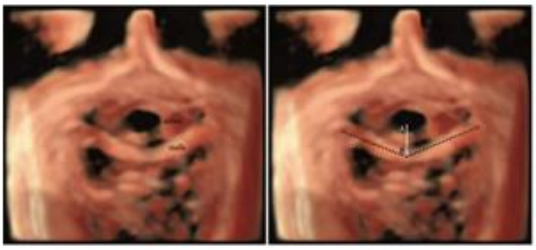

Figure2 Tape during Valsalva maneuver in the axial plane. The image on the left shows the urethra and the tape. In the image on the right we can see the calculation of the tape-lumen distance (A) and the angle α (B).

These distances were measured by placing the urethra completely vertical in plane A and closing the rendering window at the level of the tape in the rendered image (Fig. 3). To calculate the angle, a line was drawn from the entrance of the tape to the obturator foramen in its central part to the center of the tape at the suburethral level, and the same was done

on the contralateral side to obtain the angle between the two lines. The distance to the lumen was calculated from the center of the urethral lumen to the nearest part of the suburethral tape.

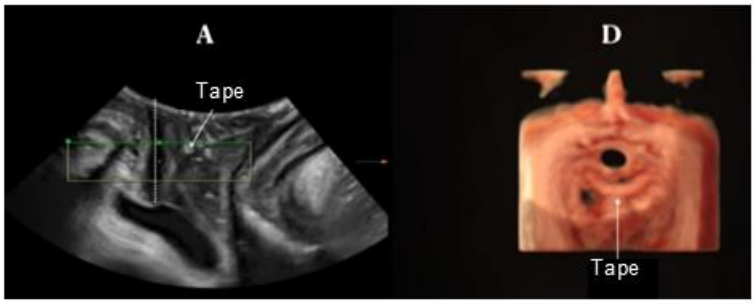

Figure 3 In plane A (sagittal) the verticalized urethra (dashed line) and the tape are shown. On the right, plane D (volumetric rendered or volumetric three-dimensional image).

In this preliminary work we selected the first 32 first volumes of patients who had improved their clinical stress incontinence, with an ICIQ-SF score ≤5, to describe the dynamic function of the tape. Data were collected in RedCAP database and analysed using STATA15.1 software (1985-2017 StataCorp LLC, Texas).
Firstly, a descriptive analysis of our study population was performed, describing the variables with means and standard deviations in quantitative variables and with percentages in qualitative variables. We established the clinical improvement of the patients, using the results of the ICIQ-SF questionnaire before and after surgery; we used the Mann Whitney U test once we observed they did not present a normal distribution. We assessed the dynamic performance of the mesh, by the change of angles and distances at rest with respect to the contraction or Valsalva maneuver; statistically significant differences were searched by the T-Student test for homogeneous variances (once it had been established that they followed a normal distribution with Saphiro Wilk and homogeneity of variances with F Snedecor).

RESULTS

32 volumes were finally evaluated. The description of the population studied is shown in Table1.The three-dimensional dynamic response of the tape from the calculation of the angle α and the mesh-lumen distance is shown in Table 2.

Table 1. Description of the study sample.

Age (years)	56.26 (10.94)*
BMI (kg/m^2)	28.21 (3.59)*
Parity	2.21 (0.79)*
Associated POP surgery	10.52%
History of instrumented delivery	42.11%
Pre-surgical ICIQ-SF	18 (p75:19 – p25:16)**
Post-surgical ICIQ-SF	0 (p75:5 – p25:0)**
Higher fetal weight (g)	3517.37 (726.41)*

*Mean and standard deviation
**Median and interquartile range

Table 2. 3D Dynamic function of the anti-incontinence

	Mean	Standard deviation
Angle α at rest	120.39*	18.61
Angle α at Valsalva	132.55*	15.71
Angle α in contraction	117.90*	21.00
Tape-lumen distance at rest	6.08**	2.02
Tape-lumen distance at Valsalva	4.68**	1.98
Tape-lumen distance in contraction	5.09**	1.95

*Degrees
**Distance in mm

The angular difference of the tape when performing the Valsalva maneuver with respect to rest was 12.17° (p=0.0068). The angular difference of the tape when performing the contraction maneuver with respect to rest was 2.49° (p=0.6178). The difference in the tape-lumen distance when performing the Valsalva maneuver with respect to rest was 1.4 mm. (p=0069). The difference in the tape-lumen distance when performing the contraction maneuver with respect to rest was 0.99 mm. (p=0.051).

CONCLUSION

By 3-4D ultrasound we can observe that after Valsalva maneuver the tape is flattened with respect to its resting position and the urethral lumen is brought closer to the tape. Although when the retention maneuver is performed, the tape tends to close the angle with respect to its resting position, this change does not reach statistical significance.
Understanding the 3D dynamic function of the tape in patients who have improved after surgery opens the door to study the changes that may occur in patients with surgery failure or complications. From these preliminary data further studies are needed.

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100 - POSTPARTUM URINARY RETENTION – A SURVEY OF PREVALENCE AND MANAGEMENT IN A TERTIARY MATERNITY CENTRE

Yunus Deeba, Resta Christina, Samuels Louisa, Swamy Sheela, Khunda Azar

Guys & St Thomas Hospital NHS Trust, Gouys & St Thomas Hospital NHS Trust, London, United Kingdom, Guys & St Thomas Hospital NHS Trust, Guys & St Thomas Hospital NHS Trust, London, United Kingdom, GUYS & ST thomas NHS Trust, Guys & St Thomas Hospital NHS Trust, London, United Kingdom

INTRODUCTION

Postpartum voiding dysfunction occurs in 0.7-4% of deliveries. When unrecognised it can lead to incomplete emptying, bladder underactivity & sequelae such as recurrent UTI & long term upper tract damage. The RCOG study group report on incontinence recommends that no woman should be allowed to go longer than 6 hrs without voiding or catheterisation postpartum. Prompt recognition and management is known to prevent complications related to urinary retention.A preliminary review of the 9 incidents reported in our unit in 2018 revealed several variations in documentation, reporting and management and there was serious underreporting of events. As a recommendation from the survey, we have conducted a review of the actual number of cases readmitted following postpartum retention for trial without catheter after 1 week.

AIM

We aim to review the incidence of postpartum urinary retention of >1 litre over 6 years and selected a subset from 2020 to study the demographics, risk factors, documentation and compare with best practice standards.

METHODS

The data reported on the incident reporting portal was only available from 2018-2021 and as there was a significant underreporting, however we reviewed admission records from Gynaecology ward for all postpartum TWOC's.
The demographic and delivery data was collated from Badgernet (electronic portal) and from enoting - Gynaecology electronic records and tabulated on a spreadsheet.

RESULTS

The number of cases readmitted over six years is shown in Figure 1 and there was a significant underreporting of the cases on the Datix portal in the 3 years. 24 of these patients were nulliparous at booking and7 were multiparous. 14 women had a normal vaginal delivery (2 had a home birth), 12 had emergency caesarean section, 3 had an instrumental delivery and 3 women had a Elective caesarean section. Age ranges are shown in Table 2 with 14 women between 36-40 years.14 women laboured spontaneously and 11 were induced and data was missing for 4 women.
Figure 1: Number of postpartum retentions > 1 litre returning for TWOC compared to the number of incident's formally reported

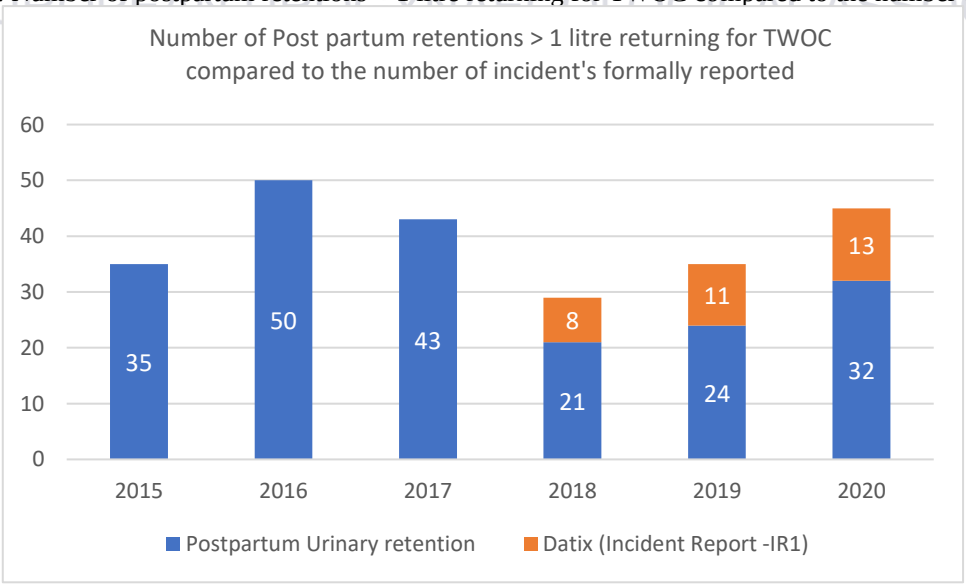

Figure 2 Demographics

Parity	0	1	2	3		Total
No of cases	24	5	1	1		
MOD	EM CS	EL CS	Instrumental	SVD		

No of cases	12	3	3	14 (1 home birth)		32
Age	20-25 years	26-30 years	31-35 years	36-40 years	41-45 years	
	2	5	10	14	1	32
Onset of Labour	Spontaneous	Induced	No Labour	Missing data		
	14	11	3	4		32

CONCLUSIONS

There is a significant underreporting of cases noted in our review despite post partum urinary retention being a datix incident. 2/3rds of the women who developed >1 litre retention did have a few intrapartum risk factors however there was paucity of recorded data on their bladder care immediately postpartum.

There was a 35 year old primiparous woman who had high residuals of 2200 mls following emlscs for fetal distress..Her catheter was removed 15 hours post delivery but she was unable to pass urine .So a catheter was reinserted 6 hours later which showed high residuals of 2200 mls.

There were 3 cases which failed TWOC after 1 week.2 had delivered vaginally .1 was a homebirth.1 was EMLSCS for fetal distress before the onset of labour.

Our survey included a case of paraplegic woman.She had multiple surgeries & had a shunt for hydrocephalus.She was doing ISC antenatally & continued after the delivery.Our survey showed that out of 32 women only 1 had documented urine dipstick result.She had positive MSU and was discharged home on antibiotics.

Despite PROMPT training on bladder care and a clear referral pathway, both management and record keeping were found to be below the standards set in our guideline. The data presented here calls for urgent review of this poignant issue and we will focus on updating the guideline and education , of staff and patients to improve both intrapartum and postpartum bladder care.

101 - MATERNAL ASIAN DESCENT AND THE RISK OF ANAL SPHINCTER INJUR

Baruch Yoav, Gold Ronen, Eisenberg Hagit, Gordon David, Groutz Asnat

Sackler Faculty of Medicine, Tel Aviv University, Department of Obstetrics and Gynecology , Tel Aviv Medical Center, Tel Aviv, Israel

INTRODUCTION AND AIM OF THE STUDY

Obstetric anal sphincter injuries (OASI) may follow vaginal delivery more so in primiparous, following operative vaginal delivery (OVD), occipito posterior presentation, prolonged second stage, and in women of Asian descent giving birth in a Western setting. OASI carry physical and psychological hazards such as urinary and anal incontinence, dyspareunia or other perineal pain. As prediction of anal sphincter injuries may improve the prevention of anal sphincter injuries we sought to characterize Asian women at risk for OASI child bearing in a western country and compare them to women of Caucasian decent.
Although OASI rate is unknown and varies between different authors it seems to range from 0.5% to 5% [1-2].
Some editors have found that Asian dissent involves a 2-3.5 times risk of OASI [1,3].
We thought to compare women from Asian decent to to further evaluate the factors that contribute to the known higher incidence of OASI among Asian.

MATERIALS AND METHODS

This is a retrospective cohort study undertaken in a tertiary-level hospital over 10 years. Women diagnosed with OASI, following singleton vaginal delivery, from January 2011 to December 2021 were investigated.
Exclusion criteria were age < 18, stillbirth and breech presentatation.
To be noted: At our institution midwifes handle uncomplicated deliveries. All operative vaginal deliveries (OVD) are managed by vacuum extraction (VE) by the obstetrician. A selective mediolateral episiotomy policy is employed. The American college of obstetrics and Gynecologist (ACOG) guidelines were used to define third
and fourth-degree perineal tear. Demographic, medical, and obstetrical data as well as fetal and maternal characteristics were gathered and compared.

RESULTS

During the study period 96,769 Caucasian women gave birth at our institution. Of these 25,629 (22.8%) delivered by caesarean section (CS) compared to 437 out of 997 (30.45%) women of Asian descent (p <0.001). The rate of OASI following vaginal delivery was ninefold higher in Asian than in Caucasian women (p <0.001) and had a significantly higher rate of forth degree OASI even though they bore smaller children, and had a significant lower rate of birth weight above 3800 grams. Asian ethnicity was also associated with significantly higher risk for blood transfusion and a lower tendency for postpartum follow up.

	Caucasions (n=345)	Asian (n=35)	P Value
Maternal characteristics			
Age (years)(SD)	31.7 (±4.5)	33 (±3.7)	0.099
Primiparity	254 (73.6%)	23 (65.7%)	0.322
Diabetes (Gestational or pregestational)	18 (5.2%)	2 (5.7%)	0.689
BMI at first Pregnancy visit (kg/m²)(IQR)	21.6 (19.5-24.3)	22.2 (20.5-24.6)	0.252
Intrapartum			
Gestational week at delivery (IQR)	40 (39.2-40.8)	39.8 (38.6-40.4)	0.11
Epidural analgesia	256 (76.8%)	17 (48.6%)	0.001
Mediolateral episiotomy	114 (33%)	17 (46%)	0.066
Occiput posterior position	26 (7.5%)	1(2.9%)	0.496
Use of Pitocin (induction\Augmentation)	222(64.3%)	17(48.6%)	0.666
Prolonged second stage	101(29.2%)	7(20%)	0.246
Instrumental delivery by Vacuum	85 (24.6%)	10 (28.6%)	0.682
Neonatal			
Birth Weight (grams)	3501(±419)	3318 (±329)	0.004

Macrosomia (≥4 kg)	43	1	0.102
3800 and more	89	1	<0.001
Male Gender	213 (61.7%)	19 (54.3%)	0.389
Maternal blood loss parameters			
HB before delivery	12.5 (11.6-13)	12.9 (12-13.6)	0.028
Delta HB	2.6 (0.9-4.2)	4.2 (2.4-5.5)	0.005
Hemoglobin level 7 (g/dL) or less	32 (9.3%)	5 (14.3%)	0.546
Transfusions - Packed cell	44 (12.75%)	6 (17.1%)	0.436
OASI parameters			
Rate of OASI	0.397%	3.51%	<0.001
3 th Degree Tear	322 (93.33%)	29 (82.9%)	0.039
4 th Degree Tear	23 (6.66%)	6 (17.1%)	0.039
Postpartum Follow up	133	6	0.012

Table 1: Differences in maternal characteristics, neonatal birthweight and gender, rate of OASI between wonen of Caucasian and Asian descent. SD=Standard deviation, IQR=Interquarantile range

INTERPRETATION OF RESULTS

We have found that the risk of OASI in asian descent woman in a western country is even higher than described in the literature and is 9 times higher and often associated with higher degree of tear.

CONCLUSIONS

We found a prominent higher rates of OASI in Asian women delivering in western countries with a higher rate of forth degree perineal tear. We can assume that if a comparison will be made by birth weight the differences will be even more significant.
The reasons remain elusive and merit to be further investigated using large cohorts.

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102 - ANAL SPHINCTER INJURY: DELIVERY MODE EMERGES AS A PROTUBERANT RISK FACTOR.

Baruch Yoav, Gold Ronen, Eisenberg Hagit, Gordon David, Groutz Asnat

Sackler Faculty of Medicine, Tel Aviv University, Department of Obstetrics and Gynecology , Tel Aviv Medical Center, Tel Aviv, Israel

INTRODUCTION AND AIM OF THE STUDY

Obstetric anal sphincter injuries (OASI) might be associated with significant maternal morbidity of which dyspareunia, perineal pain flatulence and anal incontinence prevail [1]. Known risk factors include operative vaginal delivery (OVD), primiparity, fetal macrosomia, prolonged second stage (PSS) and others. This study aimed to examine and compare risk factors for sphincter injury associated with vacuum extraction (VE) vs normal vaginal deliveries (NVD).

MATERIALS AND METHODS

This is a retrospective cohort study undertaken in a tertiary-level hospital over 10 years. Women diagnosed with OASI, following singleton vaginal delivery, from January 2011 to December 2021 were investigated. Exclusion criteria were age < 18, stillbirth and breech presentatation. To be noted: At our institution midwifes handle uncomplicated deliveries and a selective mediolateral episiotomy policy is employed. VE was employed only when fetal head is stationed below the level of the ischial spines (at +1 or more) and for one of the following indications: non-reassuring fetal heart rate (NRFHR), prolonged second stage (PSS) or when maternal pushing was contraindicated. Demographic, medical, and obstetrical data were gathered. Tears were classified according to Sultan et al. [2] criteria, later adopted by the Royal College of Obstetrics and Gynecology (RCOG).

RESULTS

The study population contained 88,123 deliveries of which 7410 (8.4%) were OVD. Women with obstetric anal sphincter injury (n=413; 0.47% of total cohort) had either third degree (n=379; 91.8%) or fourth degree (n=34; 8.2%) lacerations. Among 7410 VE cases 102 (1.37%) endured OASIS whereas among 80,713 NVD cases only 312 (0.39%) had OASI. Indications for OVD were: NRFHR (n= 4*2*; 4*1*.1%), PSS (n=37; 36.3%), both NRFHR and PSS (23; 22.6%). Among Women who underwent VE delivery *326* (4.4%) required blood transfusion, preponderantly more so if they endured OASI (n=24; 23.5%).

	Normal vaginal Delivery NVD (n=312)	Vacuum Extraction (n=102)	P Value
Maternal characteristics			
Age (years)(SD)	30.67 (±4.7)	30.55 (±4.3)	0.821
Primiparity	201 (64.6%)	96.0 (94.10%)	<0.001
Diabetes (Gestational or pregestational)	18 (5.8%)	5 (4.9%)	0.735
BMI (kg/m²)(SD)	22.1 (±3.7)	22.7 (±4.3)	0.220
Intrapartum			
Gestational Week at delivery (IQR)	39.8 (39.2-40.7)	40.14 (39.2-41.17)	0.037
Epidural analgesia	200 (64.3%)	91 (89.2%)	>0.999
Mediolateral episiotomy	71 (22.7%)	72 (70.6%)	<0.001
Occiput posterior position	7 (2.2%)	18 (17.6%)	<0.001
Use of Pitocin (induction\Augmentation)	162 (52.1%)	92 (90.2%)	<0.001
Duration second stage (min) (n=393)	68 (20-139.5)	178 (107.25-216.7)	<0.001
Prolonged second stage	55 (17.6%)	60 (58.8%)	<0.001
Duration third Stage (min) (n=395)	12 (10-17)	13 (10-19)	0.039
Neonatal			
Birth Weight (grams)	3512.7 (±434)	3371.7 (±382)	0.002
Macrosomia (≥4 kg)	4 *(*14.7%)	3 *(*2.9%)	0.001
Male Gender	191 (61.2%)	58 (56.8%)	0.435
Maternal blood loss parameters			
HB before delivery	12.5 (11.5-13.12)	12.4 (11.8-13.1)	0.775
Delta HB (n-320)	2.4 (0.65-3.7)	4.0 (2-4.9)	<0.001

Hemoglobin level 7 (g/dL) or less	23 (7.40%)	21 (20.60%)	0.002
Transfusions - Packed cell	32 (10.3%)	24 (23.5%)	0.001
OASI parameters			
3A	118 (37.8%)	27 (26.5%)	0.049
3B	96 (30.7%)	32 (31.4%)	0.054
3C	42 (13.5%)	23 (22.5%)	0.049
3 unspecified	33 (10.6%)	8 (7.8%)	0.135
4 th Degree Tear	22 (7.1%)	12 (11.8%)	0.135

Table 1: differences in maternal and neonatal characteristics, delivery parameters,maternal outcome and OASI parameters between VE and NVD among cases complicated by OASI. SD = Standard deviation, IQR = interquarantile range

A multivariate analysis showed that amog all factors found to be statisticaly significant in the initial comparison, only VE was found to be associated with deeper OASI such as 3C or forth degree tears.

INTERPRETATION OF RESULTS

Vacuum extraction is a significant factor for OASI compared to other well known risk factors

CONCLUSIONS

OVD is a robust risk factor for extensive perineal damage and is associated with significant increase in the rate of maternal blood transfusion meriting adequate preparation with packed cells in cases of OVD in concomitant with OASI. This is the only study to our knowledge that compares VE vs vaginal deliveries complicated by OASI.

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103 - IS EXTERNAL ANAL SPHINCTER CONTRACTILITY ASSOTIATED WITH LEVATOR ANI CONTRACTILITY ?

Dvorak Jan, Cacciari Licia P., Dumoulin Chantal, Martan Alois, Masata Jaromir, Svabik Kamil

First Faculty of Medicine, Charles University in Prague and General University Hospital, Department of Obstetrics and Gynecology, Prague, Czech Republic, School of Rehabilitation, Faculty of Medicine, University of Montreal, Montreal, Canada

INTRODUCTION AND AIM OF THE STUDY

The external anal sphincter (EAS) is innervated by the pudendal nerve, which also innervates the levator ani muscle. The pelvic floor plays an important role in the anal continence mechanism; however, it is difficult to voluntarily contract the EAS and the levator ani muscle separately. Recently, it was shown that the contractility of the levator ani muscle was not associated with anal incontinence. Pelvic floor weakness plays an important role in various pelvic floor dysfunctions, but it is unknown whether the functionality of these two structures is associated. The aim of our study is to assess the association between the contractility of the levator ani muscle and EAS.

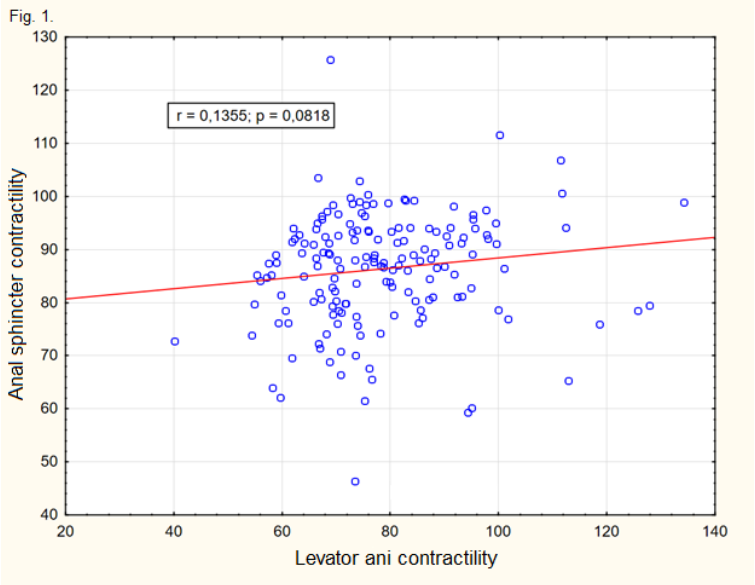
MATERIALS AND METHODS

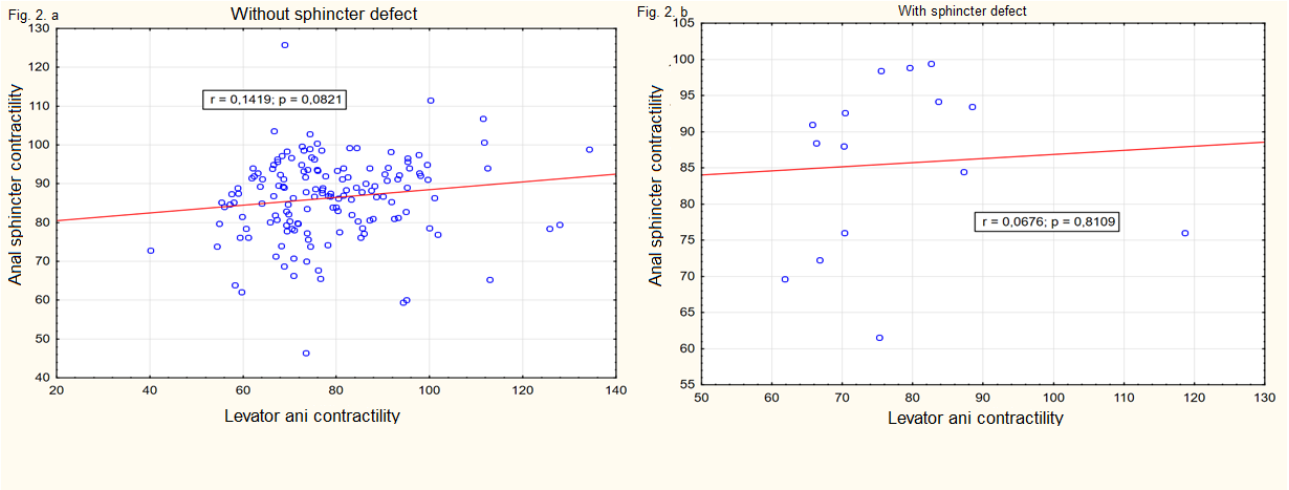
This is a retrospective cohort study of 181 women that underwent pelvic floor ultrasound examination using 4D transperineal imaging between 2017 and 2021. Women included in the study were age 18 and over and had a history of stress urinary incontinence. The levator ani muscle was examined using 4D ultrasound during maximal contraction and Valsalva, and EAS was examined at rest and during maximal contraction. Images were stored for later analysis by an evaluator, who was blinded to clinical data. We calculated the contractility of the levator ani muscle and EAS. The levator ani area was measured at the plane of minimal dimensions. The contractility of the levator ani muscle was defined as the proportional decrease of the hiatal area between rest and maximal contraction using the following formula: 100 - (levator ani area during contraction /levator ani area at rest *100). The sphincter area was defined by the outer circumference of the EAS. Anal sphincter contractility was determined using the following formula: 100 – (sphincter area during contraction / sphincter area at rest *100). Additionally, we depicted occult EAS defects using standardized ultrasound methodology. [1]

RESULTS

We included 181 women in the analysis, who had a mean age of 55.2 years (min 32, max 88), mean BMI of 27.6 (min 16.4, max 47.8) and mean parity of 1.7 (min 0, max 4). Out of 181 women, we detected 15 cases (rate 8.2%) of occult sphincter defects using ultrasound. The mean contractility of the EAS was 13.7% (SD 10.6), and the levator ani contractility was 21.7% (SD 15.3). The correlation between levator ani and EAS contractility was weak and not significant (Fig 1). Further, exclusion of patients with occult EAS defects did not show correlation (r=0.141 p=0.082) (Fig 2). The univariate analysis demonstrated that the contractility of the levator and sphincter was not affected by age or BMI.

Fig. 1.





INTERPRETATION OF RESULTS

The contractility of the anal sphincter and levator ani muscle was not significantly correlated. Function appears to be independent and only specific defects of each structure influence its function. Contractility of the levator ani and anal sphincter muscles was not dependent on age or BMI.

CONCLUSIONS

Our data shows that anal sphincter contractility was not significantly associated with levator ani, which implies that the key mechanism of dysfunction seems to be the structure and its separate injuries rather than innervation.

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104 - RELATIONSHIP BETWEEN PHYSIOTHERAPY AND SEXUALITY IN WOMEN WITH SURGICAL TREATMENT OF URINARY INCONTINENCE

García-Gómez Francisco, Rodríguez San Antonio Ana, Urrea-Serna Carmen, Martín-Parada Alejandro, García-García Miguel Ángel, Márquez-Sánchez Magaly Teresa, Máquez-Sánchez Gerardo, Padilla-Fernández Bárbara, Lorenzo-Gómez María Fernanda

Complejo Asistencial Universitario de Salamanca, Urology, Salamanca, Spain, Universidad de La Laguna, Departamento de Cirugía, La Laguna, Spain, Universidad de Salamanca, Surgery, Salamanca, Spain

INTRODUCTION AND AIM OF THE STUDY

Recent studies demonstrate the high prevalence of urinary incontinence and its impact on quality of life. Physiotherapeutic interventions can improve the quality of life and sexual function in stress urinary incontinence (SUI) (1,2).
The aim of the study is to know the benefits of physiotherapeutic treatment regarding sexual activity in women undergoing surgery for SUI by implantation of a transobturator tape (TOT).

MATERIALS AND METHODS

Experimental cross-sectional study on a sample of 204 women who underwent TOT surgery excluding patients suffering from fecal incontinence and who attended the Functional Urology Consultation.
The sample was divided into two groups:
- GROUP P (n = 44): women who underwent UI surgery, with TOT, receiving physiotherapy after TOT.
- GROUP NP (n = 160): women who underwent UI surgery with TOT not receiving physiotherapy after TOT.

Study variables: Age, BMI, follow-up time, ASA, sports activity, sexual activity, medical conditions, toxic habits, gynaecological-obstetric history, surgical history.
Statistical significance was set at $p<0.050$.

RESULTS

Mean age was 63.05 SD 10.46 (27-83) p=0.527, mean BMI was 26.68 kg/m2, SD 4.50 (17.97-50.78) p=0.1326, follow-up was 96.88 months, SD 33.17 (1.00-192.00) p=0.00059, ASA I was higher in GNP (51.88%) p=0.0023; higher sports activity in GP (36.36%) than in GNP (35%) p=0.8605, improvement in sexual activity in GP (43.18%) was greater than in GNP (32.50%) p=0.2127, deterioration in sexual activity in GP (11.36%) was less than in GNP (11.88%) p=1.0000, in GP there was more Hypertension (22.73%) and hypothyroidism, in GNP there was more obesity (19.38%), more ex-smokers in GP (29.55) than in GNP (20%) p=0.2174, more multiparous in GNP (62.50%) than in GP (45.45%) p=0.056, more hysterectomy without adnexectomy in GP (11.36) than in GNP (8.12) p=0.5490. Multiple regression (Figure 1) showed significant positive relationship between sexuality after urinary incontinence surgery and BMI (B=0186, p=0.013) and sports activity (B=0.203, p=0.041), and a negative relationship with multiparity (B=-0.831, p =0.025).

INTERPRETATION OF RESULTS

In a multivariate analysis, we found that women who underwent physiotherapy were older and had a higher surgical risk, which meant a greater failure of surgery. It is important to consider the surgical risk and to keep in mind that women's pathologies or medical history may influence the improvement of their sexual life. In addition, the improvement was short-lived, so that the patients who completed the physiotherapy treatment only benefited after a short period of time.
In terms of sexual activity, 43.18% of the women who received physiotherapy treatment improved compared to the women who did not receive physiotherapy treatment, and they worsened or remained in a lower proportion than the women who did not receive physiotherapy treatment.
In terms of obstetric and gynecologic history, it was found that nulliparous women did not have much benefit, but that those who delivered eutocically improved their sexuality after surgery, compared to those who did not receive physical therapy.
In addition, benefits were also seen in women who underwent abdominal surgery compared to those who also underwent surgery but did not receive physical therapy. In contrast, the benefits related to pelvic surgery were not as pronounced. This finding may indicate the importance of using physiotherapy prior to surgery, as perineal sensitivity and sensation may be altered after surgery and both the effect and method of delivery may not be ideal for strengthening the pelvic floor muscles and achieving satisfactory results.

CONCLUSIONS

Physiotherapy is effective in the treatment of sexuality impairment after urinary incontinence surgery with TOT.
Neuromodulation of the tibialis posterior and biofeedback are effective in the treatment of female stress urinary incontinence after TOT.

Concomitant pathologies or medical conditions, toxic habits, and obstetric-gynaecological history are variables that show improvement after the use of Physiotherapy.

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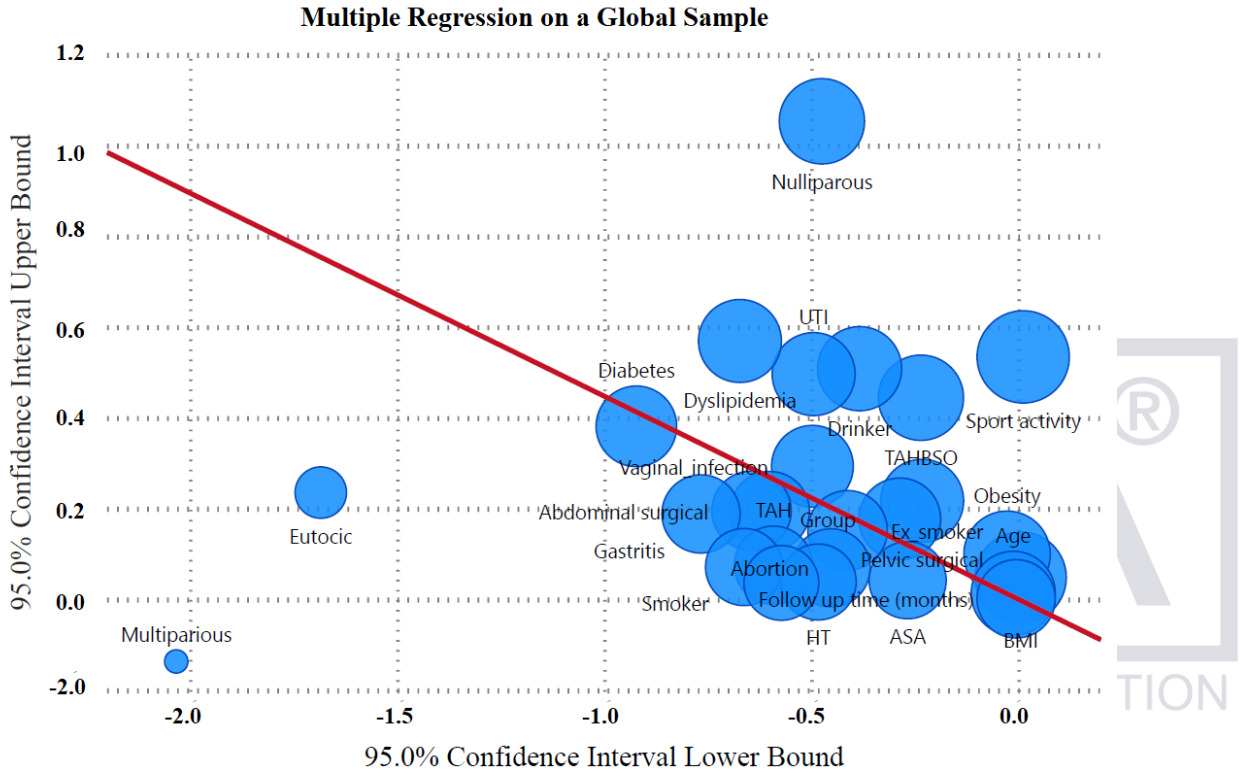

Figure 1. Multiple regression between the affectation of sexuality by urinary incontinence surgery in women (improvement, same or worsening) and the studied variables.

105 - FACTORS INFLUENCING THE DIAGNOSTIC PROTOCOL IN WOMEN BEING EVALUATED FOR LOWER URINARY TRACT FILLING SYMPTOMS OF NON-ONCOLOGIC ETIOLOGY

García-Gómez Francisco, Polo-Pérez Isabel, Urrea-Serna Carmen, Coderque-Mejía Mónica Paola, Eguíluz-Lumbreras Pablo, Márquez-Sánchez Magaly Teresa, Máquez-Sánchez Gerardo, Valverde-Martínez Lauro Sebastián, Padilla-Fernández Bárbara, Lorenzo-Gómez María Fernanda

Complejo Asistencial de Ávila, Urology, Ávila, Spain, Complejo Asistencial Universitario de Salamanca, Urology, Salamanca, Spain, Universidad de La Laguna, Departamento de Cirugía, La Laguna, Spain, Universidad de Salamanca, Surgery, Salamanca, Spain

INTRODUCTION AND AIM OF THE STUDY

Introduction: lower urinary tract symptoms (LUTS) are one of the most common reasons for consultation in urology. Filling symptoms are of great importance due to their high incidence and negative impact on quality of life (1).
Aim of the study: to identify the factors that influence the management of women studied with non-oncological lower urinary tract filling symptoms.

MATERIALS AND METHODS

Prospective observational study in 266 women with filling LUTS of non-oncological etiology since September 2016.
Study groups according to principal diagnosis:
-GT: Trigonitis.
-GL: Lithiasis
- GN: Neurogenic bladder.
- GCC: chronic cystopathy other than interstitial cystopathy.
- GIC: interstitial cystopathy.
- GU: urethral stricture.
- GM: metaplasia of the bladder.
- GS: Controls of patients operated for benign bladder disease.
Variables: Age, BMI, origin, family history, smoking, urinary symptoms: Urinary urgency and effort urinary incontinence, nocturia, pain, UTI, hematuria; complementary studies, indicated treatments.

RESULTS

The mean age was 60.73 years, and the women with trigonitis were younger. The mean BMI was 26.89 kg/m2. Women who had no family history were more common (78.95%). More smokers in GN (28.57%), fewer smokers in GIC (84.62%) and more ex-smokers in GN (50.00%). Less urinary incontinence in GU (72.73%) and more in GIC (84.62%). More urge incontinence in GT (10.00%). More nocturia in GIC (100.00%), pain in GL (100.00%), and infection in GN (100.00%).
There was more hematuria in GL (100.00%); microhematuria in GM (28.57%); and macrohematuria in GN (50.00%).More women without urine culture in GN (25.00%), more positive urine cultures in GCC (79.49%); more negative urine cultures in GM (57.14%). More urine cytologies performed resulting in hematuria in GN (50.00%), bacteriuria in GIC (25.00%), leukocyturia in GIC (33.46%), and atypical cells in GU (9.09%).More cystoscopies in GN (50.00%) and urodynamic studies in GU (27.27%).More indications for endovesical hyaluronic acid in GT (100.00%) and more urethral dilations in GL (57.14%).

INTERPRETATION OF RESULTS

In our study, there is a clear relationship between age and the following study groups: A lower age is observed in trigonitis, with a mean of 49.6 years;on the other hand, the same fact already occurs in vaginal metaplasia, an urethral syndrome characterized by a lesion influenced by estrogens, which occurs in young menstruating women, with no cases before menarche and a decreasing incidence after menopause.
As complementary tests related to age, we found contaminated urine culture at a frequency of 22% of total samples according to a previous study. This contamination was related to misuse of the specimen collection bottle or patient's ignorance regarding the hygiene measures required for specimen collection, which increased with age (2).
Analyzing the distributions of urine cytology, we see that in neurogenic bladder (GN) urine cytologies were performed more frequently and were positive, with hematuria, leukocyturia, bacteriuria and atypical cells. The diagnosis of neurogenic bladder is based on the clinical history and a series of complementary tests, which include urine cytology. This test is used to analyze the presence of urinary tract infection, which is one of the most common complications associated with neurogenic dysfunction of the lower urinary tract (3).
Urine cytology is related to other diagnostic tests such as urine culture, which is performed when a urinary tract infection is suspected to identify the responsible germ. Another diagnostic test is cystoscopy, which is based on direct visualization

of the anterior and posterior urethra and urinary bladder. All abnormal cytological findings also require cystoscopy, as it is the only reliable method to detect carcinomas of the transitional cells of the bladder and urethra. Finally, it is related to the endovesical treatment Ialuril, composed of hyaluronic acid and chondroitin sulfate, used in the treatment of pain bladder syndrome or interstitial cystitis, the diagnosis of which is based on the analysis of the lesions.

CONCLUSIONS

The differential variable that stands out the most in managing the diagnostic protocol for lower urinary tract filling symptoms in benign pathology in women is urine cytology. The most influential clinical factor in the selection of complementary tests to be used is age, with trigonitis being diagnosed more frequently in women.

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106 - CLINICAL PROFILE ASSOCIATED WITH CONGENITAL GENITOURINARY MALFORMATIONS IN WOMEN

Noya-Mourullo Andrea, Lopez-Alburquerque Patricia, Rocha-de-Lossada Alberto, Palacios-Hernandez Alberto, Herrero-Polo Manuel, Pellegrini-Belinchon Francisco, Marquez-Sanchez Gerardo-Alfonso, Marquez-Sanchez Magaly-Teresa, Padilla-Fernandez Barbara-Yolanda, Lorenzo-Gomez Maria-Fernanda

Department of Surgery, University of La Laguna, Tenerife, Spain, Department of Surgery, University of Salamanca, Salamanca, Spain, GRUMUR, Multidisciplinary Renal Research Group of the Institute for Biomedical Research of Salamanca (IBSAL), Salamanca, Spain, Pediatrics, Department of Biomedical and Diagnostic Sciences, University of Salamanca, Salamanca, Spain, Urology, University Hospital of Salamanca, Salamanca, Spain

INTRODUCTION AND AIM OF THE STUDY

Genitourinary congenital malformations have a different prognosis, stemming from alterations in embryonic development. The detection of theses anomalies are important, it allows to carry out secondary prevention, which implies the early diagnosis of chronic kidney disease and to implement actions that prevent and reduce the risk of other complications.

MATERIALS AND METHODS

Descriptive prospective study of congenital malformations, clinical histories of a series of patients who come to the Urology consultation for diagnosis and treatment of congenital malformations in the consultation period of the 2020-2021 academic year. Variables: Age, BMI, Secondary diagnoses, concomitant treatments, toxic habits, surgical history, diagnostic procedures performed, and treatment received. Within these malformations, we will focus on those collected in the Urology consultation in Salamanca, either de novo or with manifestation in childhood and progression into adulthood.

RESULTS

1.-Complete left ureteral duplication with a megaureter: 41-year-old patient, history of chronic migraine, depressive anxiety disorder and infertility, carrier of vaginal ring, performed CT scan, ruled out carcinogenic etiology and confirmed the complete ureteral duplication megaureter, treated with active and surgical surveillance with partial removal of the megaureter (Figure 1).

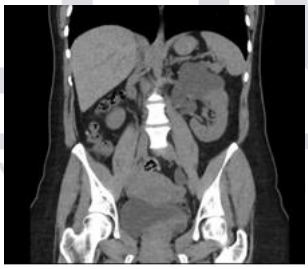

Figure 1. Coronal abdominopelvic CT with contrast. Left megaureter that has destroyed the renal parenchyma. A single cavity with associated cortical atrophy is identified in the upper pyelon.

2.-Neurogenic bladder with bilateral pyelocalyceal ectasia: 41-year-old patient with Charcot-Marie-Tooth disease and congenital ataxia, urinary incontinence, and dysuria. It is observed on ultrasound (Figure 2) a bilateral pyelocalyceal ectasia probably related to bladder hyperrepletion. No further control.

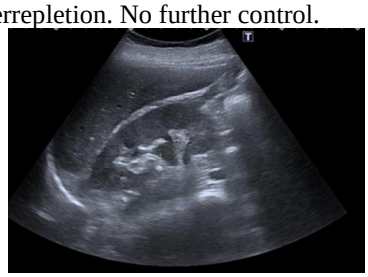

Figure 2. Renal ultrasound. Pyelocalyceal ectasia.

3.-Ectopic ureteral orifices: 55 years old, urinary urgency symptoms, hysterectomy and perianal abscess. Cystography absence of ureteral vesical reflux and absent postvoid residue, retroperitoneal fibrosis.

4.-Grade I hydronephrosis with crossing vessels: 41 years, with a history of familial cyclical neutropenia. Consultation for repeat UTIs. Urography, right functional delay with grade I hydronephrosis and normal ureter (Figure 3).

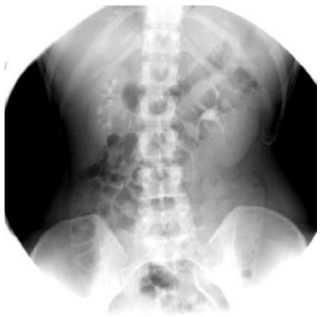

Figure 3. Intravenous urography. Right grade I hydronephrosis.
5.-Abnormal renal rotation: 64 years, hypothyroidism and endometriosis, intravenous urography and CT with right renal malrotation, without signs of pyelocalyceal ectasia or images suggestive of lithiasis. Presence of parapellic cysts in the left kidney

INTERPRETATION OF RESULTS

There are publications on the presence of complications in patients with different types of ureteral duplications, both in children and in adults, they affirm that the megaureter can be absolutely innocuous, in our clinical case, the ureter with megaureter has destroyed the renal parenchyma, the patient developed a cavity, so our results come to discuss the evidence published so far.
In pyelocalyceal ectasia, ultrasound is the best test in this situation, although CT is the test that provides the greatest accuracy when studying adjacent structures.
The hydronephrosis is a malformation that most often affects the kidneys unilaterally. The patient does not usually manifest symptoms during his life, being discovered as an incidental finding through imaging tests indicated by another situation, the treatment options depend on the presence of symptoms or complications

CONCLUSIONS

Malformations of the urinary system are very varied since they can compromise the kidney, ureter, bladder, and urethra. Some of them have no established treatment, but in most it is possible to correct them partially or totally. Hence the importance of early diagnosis to establish the best therapy for each patient and avoiding possible long-term complications.
Key words: Malformation, urinary system, kidney, bladder, ureter.

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107 - PERIPARTUM VOIDING DYSFUNCTION: WHEN IGNORANCE ISN'T BLISS

O'Kane Miriam, Da Silva Ana Sofia, Araklitis George, Davis Cathy, Rantell Angie, Robinson Dudley, Cardozo Linda

Urogynaecology Department, King's College Hospital, London, United Kingdom

INTRODUCTION AND AIM OF THE STUDY

Peripartum bladder care is essential to prevent urinary tract dysfunction caused by overdistension injuries, which can lead to permanent damage to the detrusor muscle. This may result in long-term morbidity including upper urinary tract damage, incontinence, detrusor underactivity and recurrent urinary tract infections secondary to permanent voiding difficulties (1,2,3). In recent years there has been a perceived increase in the number of women suffering from peripartum voiding dysfunction (VD). The cause of this is poorly understood. NHS England's new initiative 'Perinatal Pelvic Health' aims to improve the prevention, identification and treatment of pelvic floor dysfunction following birth, of which lower urinary tract symptoms are an important aspect. Understanding current intrapartum and postpartum bladder care is an important initial step in achieving this national ambition.

Consequently, peripartum bladder care was reviewed to determine the prevalence of underlying risk factors in cases of VD, and to identify whether substandard care is contributing to the incidence of VD in this cohort.

MATERIALS AND METHODS

A retrospective study was conducted to assess the management of women in a tertiary care hospital in London with a delivery rate of approximately 5500 per year. The demographics and care of thirty six women who developed peripartum VD between January 2020 and June 2020, defined as those who either developed spontaneous peripartum acute urinary retention, or those who failed a postpartum 'Trial without catheter'(TWOC), was examined. Cases were identified from the appointment diary of the hospital's Urogynaecology Department. Care was assessed against standards outlined in the unit's Obstetric Bladder Care Guideline. Data were collected using electronic patient records and handwritten notes.

RESULTS

94% of cases had risk factor(s) for developing voiding dysfunction. Of these, the most common was regional analgesia.

Table 1. Incidence of VD according to mode of delivery

	LSCS (n=20)		Vaginal birth (n=16)	
	Emergency (11)	Elective (9)	SVD (9)	FD (7)
Intrapartum VD	2		6	
Postpartum VD	18		10	

* LSCS = lower segment caesarean section, SVD = spontaneous vaginal birth, FD = forceps delivery

Overall 81% of women developed VD postpartum compared to 19% where it occurred intrapartum. Of the women who developed postpartum VD, 66% of them had indwelling catheters in situ, and therefore required postpartum TWOC. Of the seven women who developed intrapartum VD, none of them had care that met the standards outlined in the Bladder Care Guideline. TWOC protocol and guidance for postpartum bladder care were not followed in 54% of the women who experienced postpartum VD. In the period following discharge home with a catheter, 19% of women encountered complications. At follow up 97% of women had successful TWOCs and only 6% of women experienced ongoing lower urinary tract symptoms.

INTERPRETATION OF RESULTS

This audit highlights the frequency of underlying risk factors in cases of VD. Further studies are required to identify whether intervention can mitigate the impact of these risk factors, and therefore reduce the incidence of VD. It also demonstrates poor adherence to the Obstetric Bladder Care Guideline, and as a result exposes women to significant risk of voiding dysfunction and the associated long term morbidity.

CONCLUSIONS

Overall, substandard care is contributing to the incidence of peripartum VD. Such studies highlight the need for the NHS Long Term Plan for Maternity services, including the 'Perinatal Pelvic Health' initiaive, and provide a baseline for the development of pelvic health pathways which will facilitate the delivery of improved care.

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108 - PATIENT PERCEIVED EFFECTS OF THE COVID-19 PANDEMIC ON UROGYNECOLOGICAL SYMPTOMS

Abugarga Kantbai IMAN, Phillips Prof Christian

BSUG, Basingstoke and North Hampshire Hospital, Basingstoke, United Kingdom

INTRODUCTION AND AIM

The Covid-19 pandemic resulted in a national lockdown. As a direct result, patients were required to stay at home and hospitals had to suspend all elective activity for 2 months. Thereafter, elective care was prioritised for patients with cancer and urgent care and outpatient clinics were adapted with appointments triaged to either face-to-face appointments or a telephone appointment. The aim of this study was to identify what effects the pandemic had on the symptoms of patients referred to our urogynaecology service in a busy district general hospital in the UK and to see if certain urogynaecological conditions were more effected than others.

MATERIALS AND METHODS

Patients attending for a urogynaecology appointment (either face to face or telephone appointment) were asked to complete a questionnaire which could either be completed online or in paper format. Results were then amalgamated, input into a spreadsheet, and subsequently analysed.

RESULTS

We received a total of 94 responses, 40 responses were from the online questionnaire, while 54 were from the paper form. Overall, 37% of respondents felt their care had been interrupted due to the pandemic whilst 63% felt they had not experienced a delay in their overall care.

Of those who reported a delay in their care, the majority (54%) was due to a delay in obtaining an outpatient appointment. 10% had a delay in obtaining medications from the GP, 8% had a delay for a physiotherapy appointment, 6% for pessary change, 6% for botox injections, 6% for surgery and 2% for bladder instillations. Patients were asked how their urogynaecology symptoms had changed during the pandemic. The results are outlined in the table below.

Patient Global Impression	
Very much better	5%
Much better	0%
A little better	3%
No change	57%
A little worse	27%
Much worse	8%
Very much worse	0%

Of those whose symptoms had deteriorated: 50% of patients with prolapse felt their symptoms were worse compared with only 25% of women with OAB and 12% of women with SUI. 7% of respondents chose to go privately rather than the remain in the NHS due to the delay in care.

INTERPRETATION OF RESULTS

The majority of patients (63%) surveyed felt that their care had not been interrupted by the pandemic. In contrast, following the pandemic, our waiting times for outpatient appointments has increased by 3 months and surgery by 6 months. Conversely, the wait for physiotherapy appointments has reduced by 2 months, (due to the introduction of more telephone appointments which are shorter in duration). This data contrasts with the findings of our survey. However, we only surveyed patients who attended for an outpatient appointment rather than all patients under the care of the urogynaecology services and therefore the data would be skewed as we had not surveyed those who were still waiting for appointments or surgery. During the pandemic, medical records for all the patients under the care of the urogynaecology service were reviewed by the senior medical team and prioritised according to need. We can therefore conclude that the majority of patients were appropriately prioritised and seen accordingly compared to those of lower “priority”.

Although our numbers were very small, our results suggest women with an overactive bladder felt the pandemic had less an impact on their symptoms. Anecdotal evidence suggests they were less inconvenienced / distressed by their symptoms because they had to stay at home and thus had easy access to the toilet facilities whenever they wanted / needed. We did not measure frequency episodes or incontinence episodes which may have worsened as suggested in other studies (1). Conversely a greater proportion of patients with prolapse felt their symptoms had deteriorated which may be because they were more active in the summer months during “lock down” when they were gardening /digging and being more active.

Our results suggest the introduction of telephone appointment allowed the department to see more patients than would otherwise have been achievable due to social distancing measures and a further service evaluation has been done by the Department regarding this.

CONCLUSIONS

From the patients that we surveyed in this service evaluation, it appears that the urogynaecology department were successful in appropriately triaging patients with greater need however the pandemic has left a large hiatus in care and significant waiting times for patients with urogynaecological problems.

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109 - SEXUAL HEALTH IN BREAST CANCER SURVIVORS WITH GENITOURINARY SYNDROME OF MENOPAUSE: ONLY A DYSPAREUNIA ISSUE?

Angles-Acedo Sonia, Mension Eduard, Tortajada Marta, Matas Isabel, Gómez-Carballo Silvia, Ribera-Torres Laura, Alonso Inmaculada, Castelo-Branco Camil

Hospital Clínic de Barcelona, Gynaecology Department, Barcelona, Spain, Hospital Clínic de Barcelona, Gynaecology Department. Breast Cancer Unit, Barcelona, Spain, Hospital Clínic de Barcelona, Gynaecology Department. Breast Cancer Unit. Clinical Sexology working group, Barcelona, Spain, Hospital Clínic de Barcelona, Gynaecology Department. Clinical Sexology working group, Barcelona, Spain, Hospital Clínic de Barcelona, Gynaecology Department. Pelvic Floor Unit. Clinical Sexology working group, Barcelona, Spain

INTRODUCTION AND AIM OF THE STUDY:

Genital, urinary and sexual symptoms are present in Genitourinary Syndrome of Menopause (GSM). Breast cancer survivors (BCS) receiving aromatase inhibitors (AI) usually suffer severe GSM and sexual complaints. Vulvovaginal health is a key factor for female sexual pleasure which may be affected by lack of lubrication and dyspareunia due to GSM. However, sexual health involves not only genitals but intimacy, eroticism, reproduction or body image. These aspects may be affected in BCS and could impact in other dimensions of female sexuality as satisfaction, desire, arousal and orgasm. The goal of the present preliminary study was to assess sexual health in BCS receiving AI with GSM, regarding sexual activity, global sexual function and dimensions.

MATERIALS AND METHODS:

Study design: preliminary analysis of an ongoing prospective double-blind randomized controlled trial (RCT) with two parallel study arms: 1) Fractional CO2 laser therapy, 2) Sham laser therapy. From 10/2020, we conduct the study in Breast Cancer Unit in collaboration with the pelvic Floor Unit and the Clinical Sexology working group in a tertiary university hospital, the recruitment is planned to finish in 12/2021. Main goal RCT: to report an improvement in sexuality. Primary outcome RCT: Female Sexual Function Index (FSFI). Inclusion criteria: BCS receiving AI ± GnRH analogues; menopause, GSM signs / symptoms, dyspareunia, vaginal pH ≥5; negative Human Papillomavirus; willingness to have sex. Exclusion criteria: vaginal moisturizers and / or lubricants previous 30 days; vaginal hormonal treatment previous 6 months; radiofrequency, laser treatment, hyaluronic acid, lipofilling in the vagina previous 2 years; ospemifene treatment; being affected for: intraepithelial neoplasm of cervix, vagina, or vulva; active genital tract infection; have or have been treated for genital cancer; pelvic organ prolapse stage ≥II on pelvic examination. Herein, we present cross-sectional observational descriptive analysis focused on baseline sexual data of female BCS receiving AI with GSM, aimed to better understand the previous sexual life of the participants before any intervention. Baseline assessment: epidemiological variables and sexual interview to assess sexual activity/inactivity, nº sexual activity/week and sexual history. Vaginal Health Index (VHI) is used to vaginal health assessment. It subjectively assesses the vagina's elasticity, the amount of discharge, the integrity of the epithelium and humidity, along with pH as the only objective criteria (score ≤15 indicates vulvovaginal atrophy, range 5-25). Sexual health is assessed with 19-item Spanish validated FSFI questionnaire (1), it measures 6 sexual dimensions (desire, arousal, lubrication, orgasm, satisfaction and pain) and the global sexual function (higher score indicating a better sexual function, range 1.2-36). FSFI≤ 26.55 indicates risk of female sexual dysfunction (FSD). A specific Spanish cut-off of ≤21.7 is also proposed (2). As FSFI did not report on sexual disturbance, patients reported a visual analogue scale (VAS) 0-10 about disturbance by their sexual life (clinically significant disturbance = scored >3). All patients reported on VAS dyspareunia intensity (sexually active and inactive according to their last coital sexual activities).

RESULTS:

We included 83 women until August 2021. On average patients had been diagnosed of BC 4,5 years ago (between 06/2007 and 01/2021) and had been treated with surgery (98.7%), radiotherapy (74%), chemotherapy (71,9%) and hormonal therapy (100%). Sample characteristics are described in Table 1. FSD rate was 96% according to ≤26.55 cut off, whereas it was 78% according to ≤21,7 cut off. Sexual activity rate was 60%. Sexually inactive women were older and had worse VHI and dyspareunia than sexually active patients (statistically significant differences). Table 2 shows FSFI score among overall population, as well as according to sexual activity and sexual dysfunction. We found sexually inactive women were more affected than sexually active in the global sexual function and all of its dimensions.

INTERPRETATION OF RESULTS:

This preliminary data confirmed that BCS receiving AI with GSM presented a high prevalence of FSD not only based on dyspareunia. Comparing our findings to previous studies on healthy women (1, 2), FSFI mean score was lower and the rate of sexual dysfunction was greater in BCS. Considering original FSFI cut-off (26,55), nearly all women were sexually affected, but that did not correlate with VAS sexual disturbance stated by our patients. Conversely, the rate of FSD was similar when comparing the Spanish FSFI cut-off with reported VAS sexual disturbance. These results highlight how sociocultural differences may affect the interpretation of the results of validated questionnaires; therefore, for a better evaluation of sexuality, it should be recommended to combine quantitative and qualitative tools.

Our results showed impairment of sexual desire, arousal, lubrication, orgasm and satisfaction; therefore, dyspareunia was not the only dimension which affects sexual function and sexual activity in BCS. When comparing women with FSD to those without, in addition to the global score, all the dimensions were also affected considering the Spanish cut-off. The wide-ranging nature of the factors affecting the sexuality of those patients needs a comprehensive assessment to guarantee pleasurable sexual experiences. According to that, in the ongoing RCT, both study groups are receiving multidisciplinary approach (moisturizers, lubricants, pelvic floor muscle relaxation, dilators and sexual assessment with PLISSIT Model), so we expect to extend this sexual preliminary data at the end of the RCT.

CONCLUSIONS:

BCS receiving AI with GSM are at higher risk of FSD and sexual inactivity, both secondary to dyspareunia or other sexual dimensions impairment as desire, arousal, lubrication, orgasm and satisfaction.

110 - CYSTOCELE RECURRENCE AFTER ANTERIOR COLPORRHAPHY WITH MESH, A COMPARATIVE PROSPECTIVE STUDY.

Shtylla Arjan, Zyka Klara

Koço Gliozheni University Hospital, Koco Gliozheni, Tirana, Albania

INTRODUCTION:
Cystocele are common conditions in postmenopausal women. There are different techniques in repairing a cystocele. No matter the technique recurrence is a frequent phenomen . Our study's aim was to compare the results of a cystocele repair when performing anterior colporrhaphy with and without Mesh.

METHODS:
This is a comparative prospective study involving 55 Patients. Results where collected after postoperative visits done one year and two years after the surgery.

RESULTS:
35 of our Patients had undergone anterior colporrhaphy without Mash. 17 (49%) of which had evidence of a cystocele recurrence one year after the surgery. And 29(83%) of this Patients had evidence of a cystocele recurrence two year after surgery. By the Patients who have undergone an anterior colporrhaphy with Mesh 4 (20%) had a cystocele recurrence after one year and 9(45%) after twor years.

CONCLUSIONS:
Recurrence is seen frequent after a cystocele repair. However the use of a mesh can lower the rate of a cystocele recurrence.

111 - RESULTS OF SURGICAL TREATMENT OF URETHRAL PROLAPSE IN POSTMENOPAUSIC WOMEN: THE 3 CORNER TECHNIQUE AND RELATIONSHIP WITH PELVIAN ORGAN PROLAPSE

Noya-Mourullo Andrea, Herrero-Polo Manuel, Heredero-Zorzo Oscar, Coderque-Mejia Monica-Paola, Hernandez-Sanchez Teresa, Rocha-De-Lossada Alberto, Garcia-Gomez Francisco, Martin-Parada Alejandro, Palacios-Hernandez Alberto, Padilla-Fernandez Barbara-Yolanda, Lorenzo-Gomez Maria-Fernanda

Surgery Deparment, University of La Laguna, Tenerife, Spain, Urology, University Hospital of Salamanca, Salamanca, Spain

INTRODUCTION AND AIM OF THE STUDY

Urethral prolapse can affect women of any age. In postmenopausal women, it usually manifests with dysuria, urinary frequency and urgency, acute urine retention, or dyspareunia. In advanced stages, thrombosis and urethral necrosis appear.

OBJECTIVE:

To provide results of the correction of urethral prolapse with the 3-corner technique in 17 postmenopausal women treated for complicated urethral prolapse and to describe its relationship with pelvic organ prolapse.

MATERIALS AND METHODS

Multicentre retrospective observational study of 17 women with urethral prolapse complicated by thrombosis and urethral bleeding between 2000 and 2020. Age, health status measured with the American Society of Anaesthesiologist anesthetic risk scale (ASA), body mass index (BMI), medical and surgical background, obstetric-gynaecological history; Concomitant diseases and concomitant treatments, toxic habits, reason for consultation, time elapsed between diagnosis and surgery; size of resected tissue; pathological findings; functional results were analysed. The surgical technique is described. High quality iconography is provided. Descriptive statistics.

RESULTS

Of 19 cases of prolapse operated on in the study period, 17 corresponded to post-menopausal women. Mean age 70.4 years, SD 5.3 (57-81); mean score 2, SD 0.23; (1-3); Average BMI 25.3; SD 5.46; (19-46); 1 woman smoker, 16 without toxic habits. 9 (52.9%) had a history of pregnancy: 21 eutocic deliveries in 7 women. 2 (11.7%) patients had a surgical history of previous urethral prolapse (recurrence of urethral prolapse). 7 patients (41.17%) had a history of pelvic surgery: cystocele correction (n = 1), hysterectomy (n = 3), caesarean section (n = 2) and kidney transplantation (n = 1). Reason for consultation: feeling of a lump or mass at the genital level (n = 8, 47.05%, haematuria and / or urethritis (n = 10, 58.82%) and lower urinary tract symptoms (n = 2, 11, 76%). Mean time elapsed between diagnosis and surgical treatment had a median of 180 days (0-930 days). Tissue resected: mean 30.5 mm of urethral mucosa, SD 5.23 (5 mm-110 mm). Anatomy pathological: collagenized fibrosis (n = 5); vascular thrombosis (n = 10); squamous metaplasia (n = 5); urothelial dysplasia (n = 1). Functional results: During postoperative follow-up, 11.76% presented urinary incontinence stress that required correction with suburethral sling (n = 2; 11.76%); urge urinary incontinence with spontaneous healing without treatment (n = 2; 11.76%); no voiding sequelae (n = 13; 76.46%) 2 patients had to be reoperated due to recurrence of the prolapse, in 3 cases (17.6%) the urethral prolapse preceded the pelvic organ prolapse.
Surgical technique: modified lithotomy position. Placement of 16CH urethral catheter with 20 cc of fixation balloon, identification of internal limit of mucosa resection. placement of 3 mucosa fixation points at 11 o'clock, 2 o'clock and 6 o'clock of the cystoscopy time. Redundant mucosa resection. Continuous suture in the 3 defined sectors with 4/0 vicryl thread. A urethral catheter is left for 10 days, with a stopper (not with a bag). Wound cures with rosalgin powders for 10 days.

INTERPRETATION OF RESULTS

The true prevalence of urethral prolapse is unknown. It is not related to obstetric-gynaecological antecedents or to pelvic organ prolapse. The most feared sequel to his surgical treatment is urinary incontinence. However, using the described technique, high continence and cure rates are achieved.

CONCLUSIONS

In postmenopausal women with complicated urethral prolapse, surgical removal using the 3-corner technique provides good functional results. Urethral prolapse is not related to obstetric-gynaecological history nor is it concomitant with prolapse of other pelvic organs, although in some cases it may appear earlier in time.

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112 - PERINEAL THERMOGRAPHY AS AN ASSESSMENT TOOL FOR PELVIC FLOOR DYSFUNCTION (PILOT STUDY)

Salameh Fadi, Mitchell Jill, O'Flaherty Doireann, Murphy Brian, Burke Naomi

CAI, The Rotunda, Dublin, Ireland, RCPI, The Rotunda, Dublin, Ireland

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113 - PREDICTIVE FACTORS OF AN INTACT PERINEUM IN VAGINAL DELIVERIES ATTENDED WITH HANDS-ON PERINEAL PROTECTION

Martínez Paires Mireia, Fernández Blanco María, Pereda Núñez Ana, Recoder Fernández Adriana, Gil Molano Maria Fernanda, Ojeda Pérez Felipe

Ginecología, Hospital General de Granollers, Barcelona, Spain

INTRODUCTION AND AIM OF THE STUDY

Perineal lacerations are a common complication after vaginal deliveries. Perineal tears are classified according to the muscle involvement. Obstetric anal sphincter injuries (OASIS) are related with increased postpartum pain, dyspareunia, and urinary and faecal incontinence.

The aim of this study was to design a statistical model to predict an intact perineum in women with a vaginal delivery protected with hands-on method.

MATERIALS AND METHODS

A retrospective observational study was conducted at a maternity of a regional hospital including 1103 consecutive women with a vaginal delivery protected with hands-on method between October 2019 and December 2020.

Intact perineum was considered in cases with no need of suture points diagnosed both by doctors and midwifes who assisted the labour. Otherwise the outcome of perineal integrity was classified as a tear.

Age, parity, gestational age, second stage of labour length, newborn birth weight and operator experience were studied and data were collected from patient's clinical record. A multivariate logistic regression analysis was performed in order to identify predictive factors of an intact perineum.

RESULTS

Age mean was 31 ± 5.9 years and previous vaginal deliveries mean was 0.92±1.06 being 450 (40.8%) primiparous women. Gestational age mean at delivery was 39.6±1.6 weeks and 32 (4.44%) were preterm deliveries. Second stage of labour length mean was 63.97 ± 64.5 minutes. 150 (13.6%) deliveries were instrumented either with forceps, vacuum or Thierry's spatula. In 383 (34.7%) cases a selective episiotomy was performed. Newborn weight mean was 3335±479.85 grams. 257 (23.3%) women had an intact perineum after vaginal delivery and 846 (76.7%) presented a perineal trauma including patients with a selective episiotomy. OASIS cases were 12 (1.09%).

In univariate study was established a statistically significant relationship between perineum lesions and number of previous vaginal deliveries (p =<0.001), gestational age at labour (p <0.001), second stage labour length (p<0.001) and instrumented deliveries (p <0.001).

No differences were identified in history of previous c-section, newborn weight and operator experience.

Model designed to predict an intact perineum after a vaginal delivery presents an area under receiver-operating characteristics curve of 0.796 (Figure 1) with a sensibility of 60% and specificity of 80.74%.

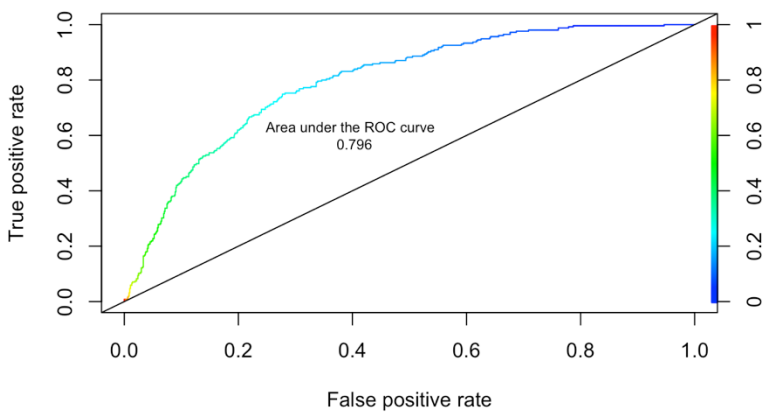

Figure 1. Area under the ROC curve

INTERPRETATION OF RESULTS

Factors associated with a vaginal delivery without perineal injuries have been a history of previous vaginal deliveries; gestational age, with fewer injuries in deliveries before 40 weeks of gestation and a second stage labour of less than one hour. Not having an instrumental delivery has been associated with a lower risk of perineal injury. It should be noted that no significant differences were found according to birth weight. There were no differences whether the delivery was performed by staff in training or by a specialist.

CONCLUSIONS

Taking these risk factors into account we can determine which patients are most likely to have a vaginal delivery with an intact perineum. Although we must take into account several of the factors analysed, such as second stage labour time, we cannot predict this in advance.

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	Intact perineum N= 257 (23.3%)	**Perineal trauma** N=846 (76.7%)	**p-value***
Age (years)	31,17	31,74	0.2755
Previous vaginal deliveries	1.61	0,72	**<0,001**
Gestational age at labour (weeks)	39,37	39,67	**0,045**
Second stage labour (minutes)	39,91	72,19	**<0,001**
Weight (g)	3312	3342	0,4338
Delivery			
Instrumental delivery	3 (0,27%)	147 (13,34%)	
Eutòcic delivery	254 (23,05%)	698 (63,34%)	**<0,001**
Staff			
Training	119 (10,80%)	401 (36,39%)	
Specialist	138 (12,52%)	444 (40,29%)	0,8006

**Chi-square test for categorical variables and Wilcoxon rank sum test for continuous variables.*

114 - PREDICTIVE FACTORS OF SELECTIVE EPISIOTOMY USE DURING VAGINAL DELIVERIES: A MULTIVARIATE LOGISTIC REGRESSION ANALYSIS MODEL

Fernández Blanco María, Martínez Pairés Mireia, Pereda Núñez Ana, Recoder Fernández Adriana, Gil Molano Maria Fernanda, Ojeda Pérez Felipe

Ginecología, Hospital General de Granollers, Barcelona, Spain

INTRODUCTION AND AIM OF THE STUDY

Use of episiotomy during delivery is a substantial concern for most pregnant women. However restrictive episiotomy use did not demonstrate an obstetric anal sphincter injury (OASIS) higher rate.
The aim of this study was to develop a statistical model to predict risk of episiotomy use in single vaginal deliveries in order to notice before moment of labour those women whom presents a high possibility of episiotomy.

MATERIALS AND METHODS

A retrospective observational study was conducted at a maternity of a regional hospital.
1103 consecutive women with a single vaginal delivery between October 2019 and December 2020 were included. All deliveries in our center are protected with hands-on method and episiotomy use was selective. Vaginal deliveries were assisted both by doctors and midwifes.
Data were collected from patient's clinical record and women, newborn and labour data were included. Multivariate logistic regression analysis was performed in order to identify predictive factors of a higher risk of episiotomy use.

RESULTS

In 383 (34.7%) deliveries a selective episiotomy was performed. Age mean was 31 ± 5.9 years. 450 (40.8%) were primiparous and previous vaginal deliveries mean was 0.92±1.06. Gestational age mean at delivery was 39.6±1.6 weeks. Second stage of labour length mean was 63.97 ± 64.5 minutes and 150 (13.6%) deliveries were instrumented. Newborn weight mean was 3335±479.85 grams. In 12 (1.09%) cases an OASIS was detected.
Univariate study a statistically significant relationship between episiotomy use and the following variables were obtained: age (p=0.0003), number of previous vaginal deliveries (p <0.001), g, second stage labour length (p<0.001), instrumented deliveries (p<0.001) and training of delivery attender.
Predictive model developed to predict risk of episiotomy use during vaginal delivery presents an area under receiver-operating characteristics (ROC) curve of 0.851 (Figure 1) with a sensibility of 73.31% and specificity of 81.10%.

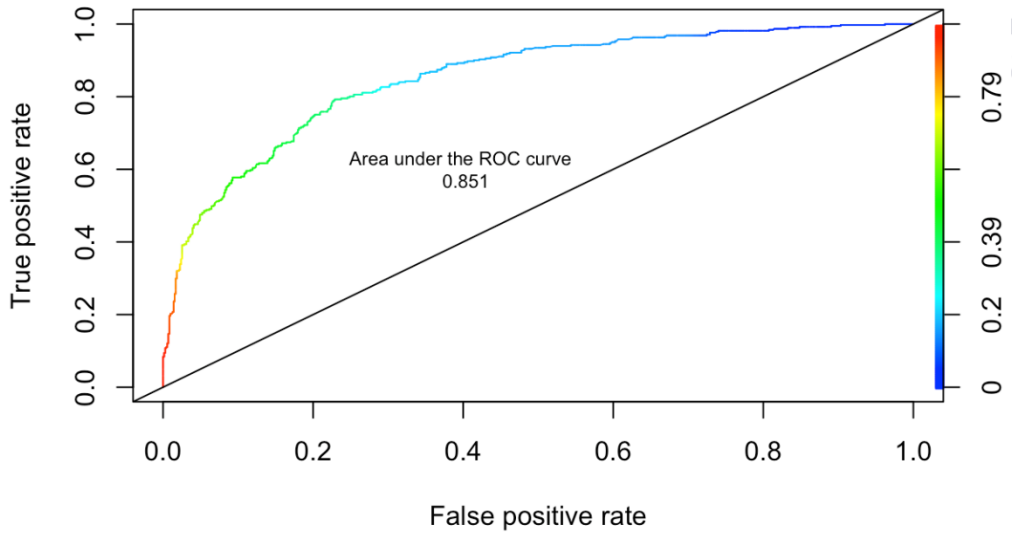

Figure 1: Area under the ROC curve

INTERPRETATION OF RESULTS

Factors related with selective episiotomy use were age, history of previous vaginal deliveries; second stage labour length, instrumentation of delivery and staff who attend the delivery finding a lower rate of episiotomy in deliveries attended by midwifes.
No differences were identified in history of previous c-section, new-born weight and gestational age.

CONCLUSIONS

Based on the results we can predict which patients are most likely to be candidates for episiotomy. However, there are risk factors that we cannot present to the patient before the day of delivery, such as instrumental delivery.

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	Episiotomy N= 383 (34,72%)	**Without episiotomy** N=719 (65,28%)	**p-value***
Age (years)	30,75	32,06	**0.0003**
Previous vaginal deliveries	0,3	1,25	**<0,001**
Gestational age at labour (weeks)	39,73	39,54	0,052
Second stage labour (minutes)	98,00	45,89	**<0,001**
Weight (g)	3301	3354	0,1558
Delivery			
Instrumental delivery	131 (11,90%)	19 (1,72%)	
Eutòcic delivery	252 (22,89%)	699 (63,48%)	**<0,001**
Staff			
Midwife	166 (15,07%)	562 (51,04%)	
Gynaecologist	217 (19,70%)	156 (14,17%)	**<0,001**

**Chi-square test for categorical variables and Wilcoxon rank sum test for continuous variables.*

VIDEO ABSTRACTS

1V - COMPARISON OF TREATMENT OUTCOME OF PELVIC ORGAN PROLAPSE WITH OR WITHOUT MESH IMPLANTATION (NATIVE TISSUE OR MESH REPAIR)

Buzadzic Snezana, Aksam Slavica, Cerovic-Popovic Radojka, Vukovic Ivana

Gynecology and Obstetrics Clinic, Clinical centre of Serbia, Gynecology and Obstetrics Clinic, Clinical centre of Serbia, Belgrade, Serbia

In case of vaginal wall prolapse in the lower half of vagina, vaginal hysterectomy with anterior and posterior vaginal wall repair will not give satisfactory results in terms of the depth of vagina and will not prevent the recurrence of vaginal wall prolapse. In such cases, it is necessary to apply a procedure which will provide a suspension of the vaginal arches such as transvagianal sacrospinosus colpopexy and a MESH (as a tertiary technique).
Indications for vaginal arches suspension are anterior or posterior vaginal wall prolapse, total pelvic organ prolapse, vaginal eversion after vaginal and abdominal hysterectomy (in 0.5% of patients.
Surgery and reoperation risk occurs due to pelvic tissue weakness caused by genetic, traumatic and mechanical factors associated with sexual activity, regardless of age. In the general female population, it occurs in 11% of patients. The failure of the first operation during 5 years is 29% (13-56% in general female population).
We decide, for the MESH implantation as a tertiary technique, in order to do an adequate reconstruction, restore pelvic anatomy and normal function of pelvic organs, prevent the recurrence of POP and urinary problems and improve patients quality of life.
In the late ninities, MESH anterior and posterior came into use in urogynecology. The first warnings about complications, due to the use of polypropylene, appear after 2008. Since then, the implant using is slowly decreasing. In many countries, the trend is to use implants when there is no other option and application of an individual approach to patients. At the urogynecology ward of my clinic, transvaginal sacrospinosus colpopexy and the implant material has been in use since 2001 and 2006, respectively.
Complicatoins from surgical MESH are urinary retention, bowel empting disorder (defecation) and obstructive symptoms, MESH exposure – asymptomatic and symptomatic, erosion into the bladder or rectum, pain, hematoma, dispareunia, bowel dysfunction, fistula, sacral osteomyelitis or discitis, recurrent POP, complete sexual and physiological dysfunction, constant pain that increase during sexual intercourse, disruption of intimacy and private life.
European Health Commission concluded in 2015 that MESH are used when classical surgery failed. Australia and New Zealand banned the use of implants in 2017. The National Health Service announced in 2017 that MESH should be banned because they are not a guarantee for permanent solution and the complication are very serious. In September 2018, the Scottish NHS developed a protocol for the use of third-generation MESH.
In April 2019, the FDA banned the use of implant material due to constant pain.
For the time being, the problem of incontinence remained unsolved. Now, it is up to researchers to find some new solutions.

2V - LAPAROSCOPIC PARAVAGINAL MESH FIXATION DURING LAPAROSCOPIC SACROCOLPOPEXY – AN IMPORTANT STEP TO AVOID ANTERIOR RECURRENCE. A SURGICAL VIDEO

Evgenia Bousouni, Dimitri Sarlos

Cantonal Hospital of Aarau, Department of Urogynecology, Aarau, Switzerland

INTRODUCTION

Laparoscopic sacrocolpopexy has been demonstrated to be the gold standard of prolapse surgery in cases with apical defect. Isolated anterior compartment failure can occur especially if paravaginal defect has initially been present. According to our and other results anterior recurrence can occur in up to 10% of cases and additional surgery is needed in about 5-6%. In the last 2 years we adapted our technique of lateral fixation of the anterior mesh during laparoscopic sacrocolpopexy to reduce the risk of anterior recurrences and the first results are very encouraging.

MATERIAL AND METHODS

The Video demonstrates the cases of a 67 years old patient undergoing laparoscopic sacrocolpopexy because of combined prolapse. After accomplishing supracervical hysterectomy and posterior dissection, the anterior dissection is started by opening the vesico-vaginal space and separating the bladder from the vagina till the level of the bladder trigone. Lateral dissection is performed by opening the paravaginal space and exposing the lateral edge of the vagina. The distal part of the ureters is dissected from the anterior parametrium to the bladder to avoid ureteral damage. The anterior mesh is than sutured to the distal vaginal in the midline and laterally to the edge of the vagina. Posterior mesh is sutured on the levator ani muscle and the cervix. Both meshes are fixed at the longitudinal ligament of the promontory to guarantee a tension free suspension. At the end a fully peritonealization is performed.

RESULTS

Perioperative results of laparoscopic sacrocolpopexy with deep and lateral mesh fixation are excellent. As we are following all our patients after laparoscopic sacrocolpopexy we can report on a significant improvement of anatomical outcome in the anterior compartment at least in the short term follow up.

CONCLUSION

Lateral dissection and mesh fixation in the anterior compartment during laparoscopic sacrocolpopexy seem to be feasible and safe and could help to significantly reduce the risk of anterior recurrences. Prospective anatomical evaluation must be performed to scientifically verify these promising initial results. This video demonstrates the surgical technique which has become standard in our institution.

3V - TIPS AND TRICKS DURING LAPAROSCOPIC SACROCOLPOPEXY – SOME STEPS TO IMPROVE SURGICAL QUALITY AND OUTCOME. A VIDEO PRESENTATION.

Evgenia Bousouni, Dimitri Sarlos

Cantonal Hospital of Aarau, Department of Urogynecology, Aarau, Switzerland

INTRODUCTION

Laparoscopic sacrocolpopexy has been demonstrated to be the gold standard of prolapse surgery. That is the most important reason why gynecological surgeons must be well trained. Although it is an operation which needs experience in laparoscopic surgery but can be easily standardized for teaching.

MATERIAL AND METHODS

The Video demonstrates some important tips and tricks undergoing laparoscopic sacrocolpopexy, which help us to operate more efficient, easier and safe.

The correct position of the trocars is crucial for the ergonomics. Some manipulation tips are important to operate with precision.

The transient fixation of sigma to the pelvic wall with T-Lifts helps to have more space and a much better view of structures in the posterior compartment and gives an optimal approach to the rectovaginal space. We present some tricks how to open the rectovaginal space and to dissect the rectum gradually from the posterior wall of the vagina, so that an atraumatic preparation can be achieved in a few steps until the muscles of the pelvic floor for deep attachment of the mesh in the posterior compartment.

Also, some tips according to the dissection of anterior compartment, how to lift the bladder and then to open the paravaginal space starting laterally to expose the ureter paravaginal to prevent injury and to place the mesh as lateral as possible for optimal correction of paravaginal defects.

We also demonstrate some technical tips like which sutures to make with the left hand due to the angle of the instruments and how to perform the sutures to fix the mesh at the levator and the promontory much easier and comfortable and how to do the complete peritonealisation of the mesh, which is very important to avoid intestinal incarceration and injuries.

RESULTS

As we are following all these tips and tricks during laparoscopic sacrocolpopexy we can report a shorter time of operation and an improvement on quality and result.

CONCLUSION

Laparoscopic sacrocolpopexy is a challenging operation which presupposes not only experience in laparoscopic surgery but also some techniques to improve the operating quality. This video could be helpful for young urogynecologists in teaching to improve their technique.

4V - VAGINAL HYSTERECTOMY UNDER LOCAL ANESTHESIA AND CONSCIOUS SEDATION FOR A LARGE PROLAPSED MYOMATOUS UTERUS

Zacharakis Dimitrios, Athanasiou Stavros, Kalantzis Christos, Hantzilia Sofia, Grigoriadis Themos

Anesthisiology Department, National and Kapodistrian University of Athens, Urogynecology Department, Athens, Greece, Urogynecology Unit, National and Kapodistrian University of Athens, Urogynecology Department, Athens, Greece

INTRODUCTION AND AIM OF THE VIDEO:
In this video we present the surgical management of a 58-year-old woman presenting with a large prolapsed myomatous uterus treated with vaginal hysterectomy (VH) and pelvic floor repair (PFR) (uterosacral ligament suspension and posterior colporraphy) under local anesthesia and conscious sedation.

METHOD:
The patient underwent VH and PFR by using an infiltration of a local anesthetic solution of lidocaine, ropivacaine and adrenaline in combination with intravenous (iv) conscious sedation.

RESULTS:
Debulking techniques, such as intramyometrial coring, uterine bisection, myomectomy and wedge resection were used to facilitate VH.

DISCUSSION:
This video demonstrates that performing a surgically challenging VH under local anesthesia is feasible. Vaginal uterine morcellation can be performed to debulk the enlarged uterus, so that hysterectomy can be accomplished under local anesthesia.

CONCLUSION:
The use of local anesthesia may safely be offered as an alternative to patients undergoing a complex vaginal hysterectomy and reconstructive surgery.

5V - ROBOTIC REPAIR OF VESICOVAGINAL FISTULA

Pham Cecile, Winter Matthew

North Shore Urology Research Group, Royal North Shore Hospital, St Leonards, Australia

INTRODUCTION AND AIM OF THE STUDY

Vesicovaginal fistula (VVF) is a pathological communication between the posterior bladder wall and anterior vagina. A variety of techniques have been described in the literature but there has only recently been a consensus on best robotic surgical practice. [1] This best practice surgical technique has not been described with visual demonstrations. We present a video of a robotic-assisted repair of a VVF with trans-vesical approach and omental interposition.

MATERIALS AND METHODS

We outline the key steps in VVF repair, including a cystoscopy to establish the number, size and location of VVF. Bilateral double-J ureteric stents were inserted to protect the ureteric orifices. The VVF was marked by placing a guidewire through the defect via the vagina. A robotic-assisted VVF repair with trans-vesical approach was performed using the da Vinci Xi surgical system. The vesicovaginal space was dissected, the fistula track exposed and fistulectomy performed. Multi-layer, tension-free closure of the vagina and bladder with omental interposition was performed, followed by a leak test to ensure water-tight closure. An indwelling catheter (IDC) was inserted at the conclusion of the case.

RESULTS

There were no intra or post-operative complications. The patient was discharged on post-operative day 3 and the IDC was removed on post-operative day 10. At three-month follow-up, she did not have ongoing incontinence or recurrence of the fistula.

CONCLUSIONS

Robotic repair of VVF is both safe and effective. Robotic surgery facilitates dissection of the vesicovaginal space, mobilization of an omental flap and multi-layer tension-free closure of the bladder and vagina.

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6V - RADIATION-INDUCED VESICOVAGINAL FISTULA WITH VAGINAL STENOSIS-TRANSVAGINAL REPAIR USING LABIA MAJORA FLAP-A FEASIBLE SOLUTION TO THIS CHALLENGING PROBLEM.

Gupta Praanjal, Kalra Siddharth, Dorairajan Lalgudi N, Manikandan Ramanitharan, KS Sreerag, Jagannath Avinash

JIPMER, Urology, Puducherry, India

INTRODUCTION AND AIM OF THE STUDY

Radiation-induced vesicovaginal fistula (VVF) offers a challenge due to the surrounding tissues' poor quality, non-capacious vagina, and nonhealing tendency. (1) Their closure may be a hurdle for the reconstructive urologist. (2) This series reports a feasible technique of transvaginal repair of VVF demonstrating prudent use of local flaps.

MATERIALS AND METHODS

Three patients with radiation-induced VVF underwent transvaginal repair over five years. The clinico-demographic profile, duration, dose of radiation, the technique of repair, and the outcomes were studied. We demonstrate the judicious use of labia majora flap through this video presentation.

RESULTS

Three patients underwent transvaginal VVF repair. Labia majora fasciocutaneous flap was used in all the patients. The various parameters are depicted in Table-1. None of the patients reported a leak at six months follow-up.

INTERPRETATION OF RESULTS

Mediolateral vaginal wall incision improves the working space. The labia majora fasciocutaneous flap offers a mobile, well vascularised option for transvaginal repair of radiation-induced VVF. Stanojevic et al. found it as a good alternative for the surgical treatment of VVF.(2)

CONCLUSIONS

Repair of radiation-induced VVF may be an arduous job. However, a labia majora flap may provide a prudent solution. The versatile labia majora flap enables simple harvesting of a long flap that can be used to repair radiation-induced VVF and, with adequate mobility and vascularity, mitigates the operative glitches.

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Parameters	CASE-1	CASE-2	CASE-3(Case in video)
Age(years)	55	63	46
Presentation	CONTINOUS VAGINAL LEAK	CONTINOUS VAGINAL LEAK	CONTINOUS VAGINAL LEAK
CA CERVIX STAGE	3B	3B	3B
RADIATION	EBRT+BRACHY	EBRT+BRACHY	EBRT+BRACHYTHERAPY
RADIATION DOSE	50Gy/25#	50Gy/25#	46Gy/23#, 4Gy/2#
	8Gy/3#	8Gy/3#	
RADIATION DURATION	8 WEEKS	8 WEEKS	8 WEEKS

Onset of symptoms after radiation	After 4 years	After 1 year	After 1 year
Duration of surgery from onset of symptoms	12 months	14 months	22 months
HYSTERECTOMY DONE	DONE	DONE	NOT DONE
LOCATION	Anterior wall of the vagina at approximately 5 cm from introitus towards the left side	Anterior wall of the vagina at approximately 4 cm from introitus towards left side	Anterior wall of the vagina at approximately 4 cm from introitus towards midline
Provisional diagnosis	VVF	VVF	VVF
CT UROGRAPHY	VVF tract 8 mm length and 5 mm width	8mm wide fistulous tract	1cmx1cm wide fistulous tract
Approach	Vaginal	Vaginal	Vaginal
Surgery	VVF repair with labia majora fasciocutaneous flap	VVF repair with labia majora fasciocutaneous flap	VVF repair with labia majora fasciocutaneous flap
Reason for proposed surgery	Narrow stenosed vagina	Narrow stenosed vagina	Narrow stenosed vagina
Outcome(At 3 & 6 months follow-up)	No leak	No leak	No leak
Anticholinergics post-op	YES	YES	YES

Table-1 Various parameters of the patients who underwent transvaginal repair of VVF.

7V - SURGICAL MANAGEMENT OF RECURRENT PELVIC ORGAN PROLAPSE AFTER LAPAROSCOPIC SACROCOLPOPEXY

Studer Andreas, Fähnle Ivo, Christmann Corina

Department of Urogynaecology, Cantonal Hospital of Lucerne, Lucerne, Switzerland

INTRODUCTION AND AIM OF THE STUDY

Laparoscopic sacrocolpopexy (SCP) is the gold standard surgical treatment option for the management of apical or multi-compartment pelvic organ prolapse (POP) with high subjective and objective success rates. However few women report with symptomatic recurrent POP and subsequent vaginal surgical options are limited. Therefore, a repeat SCP must be discussed individually. Due to local scaring, altered anatomical presentation and presence of a mesh this procedure remains a challenging treatment option.
Our video presents different approaches of a repeat SCP and various intraoperative options to complete a successful surgery and how to minimize the complication rate.

MATERIALS AND METHODS

We will present various cases to demonstrate the diversity of laparoscopic treatment options in the case of recurrent POP after SCP with the associated difficulties.

RESULTS

This overview demonstrates that a repeat SCP is feasible and safe but must be treated individualised due to different underlying problems.

INTERPRETATION OF RESULTS

Due to varying causes of recurrency, various intraoperative surgical approaches must be considered such as resection of the primarily placed mesh, selected new mesh placement anteriorly or posteriorly, adaptation of the mesh in-situ like shortening or re-fixation as well as paravaginal repair in case of isolated lateral defect.

CONCLUSIONS

In the case of recurrent POP after SCP we consider a laparoscopic approach feasible and safe despite conservative and vaginal treatment options. Owing the fact of challenging surgery and varying complaints the performed procedure needs to be adapted and to be discuss with the women individually. Therefore, it is utterly most important to know common pitfalls and ways to adjust the operation to get the best result.

8V - LAPAROSCOPIC PREPERITONEAL BURCH COLPOSUSPENSION

Di Serio Marcello, Achtari Chahin, Nessi Aude

CHCVS, Hôpital du Valais, Sion, Switzerland, CHUV, CHUV, Lausanne, Switzerland

Retropubic Colposuspension for the treatment of stress urinary incontinence (SUI) was first described by Dr John C. Burch in 1961. The use of this technique has been replaced by urethral synthetic slings. Following the 2011 and 2019 Food and Drug Administration notifications on transvaginal mesh products, the negative advertising associated with vaginal synthetic mesh products has extended unavoidably to urethral slings. We are therefore faced with an increase in interest in native tissue repair techniques. The Burch procedure is well known as an effective treatment for SUI but generally not frequently performed due to morbidity associated with laparotomy. The technical difficulties and morbidity of laparotomic approach have been overcome by the laparoscopic approach. Furthermore, the direct preperitoneal approach has the advantage of reducing the risk of intestinal and bladder lesions by improving vision during surgery. The purpose of this video is to propose an alternative approach that has the characteristics of simplicity and reproducibility while contributing to improve the feasibility and safety of this type of intervention

9V - BILATERAL UTEROSACRAL LIGAMENT REPLACEMENT - LAPAROSCOPIC UTEROSACROPEXY (LAUSA) WITH MINIMAL USE OF MATERIAL AND UTERUS PRESERVATION

Ludwig Sebastian, Morgenstern Bernd, Mallmann Peter

Division of Urogynecology, University of Cologne, Cologne, Germany

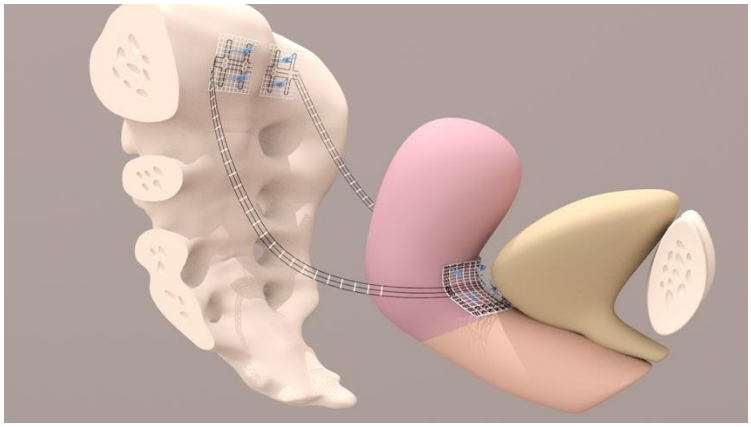
INTRODUCTION AND AIM OF THE STUDY

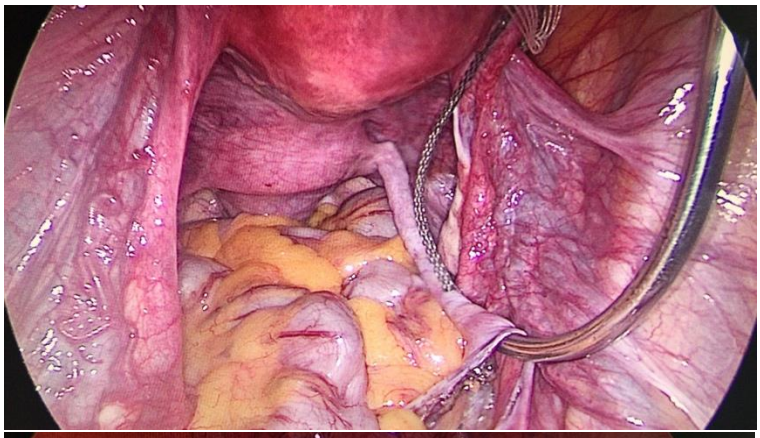
Prolapse of the uterus in premenopausal women is a concerning condition and therapeutic options are limited especially if uterine preservation is demanded. We present a newly developed laparoscopic surgical technique to restore apical suspension in case of uterine preservation. A curved tunneling device was used to replace both uterosacral-ligaments (USL) and, thereby, the peritoneum´s integrity was preserved while a minimum amount of alloplastic tape (polyvinylidene-fluoride, PVDF) was used.

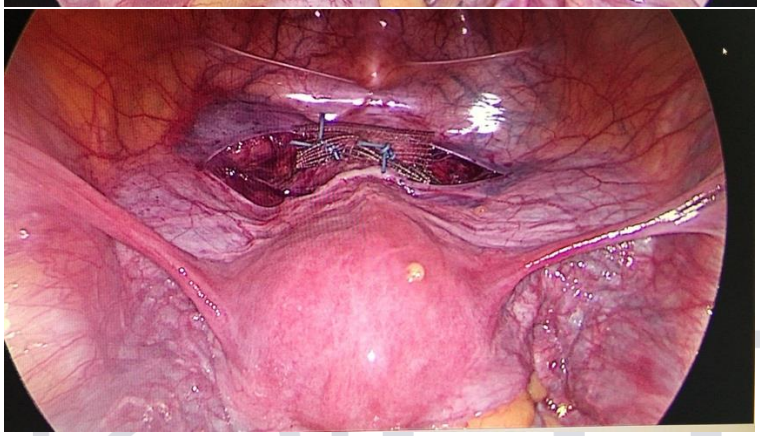
MATERIALS AND METHODS

Women with apical prolapse and urinary incontinence were referred to our tertiary unit. The patients have failed or declined conservative management none of them had undergone previous urogynecological surgery.
For the laparoscopic uterosacropexy:

1. The bladder was identified on the anterior cervix and their peritoneum was incised laterally until the left and right uterine vessels were displayed. The space lateral to these vessels was prepared blunt.
2. The peritoneum over the promontory was incised for 2 cm on the right side of the rectosigmoid colon in order to prepare both lateral margins of the promontory for posterior fixation;
3. For USL replacement, a PVDF-structure of 9.3 cm in length and 4 mm in width was used. A semi-circular curved hook was used for insertion.
4. The semi-circular tunneler was inserted via the right lateral trocar incision. In order to tunnel the left USL, the rectosigmoid was undertunneld and the tunneler´s blunt tip was slightly forwarded under the peritoneum along the run of the left USL toward the cervix, paracervical. The lateral end of the PVDF-structure was threaded through the hole of the tunneler´s tip, and then carefully pulled back. Same was done to tunnel the right USL.
5. The central fixation part of the PVDF-structure was sutured horizontally to the anterior cervix by using 2 interrupted nonabsorbable sutures.
6. Each arm of the PVDF-structure was attached (at the allocated mark) with 3 titanium helices to the right and left lateral prevertebral fascia of S1/promontory by using a fixation device.







RESULTS

Apical support was restored in all 10 patients. No intraoperative complications like major vessel or ureter injury and bowel or bladder lesions occurred. Blood loss was less than 20ml per patient. Within follow-up of 6 months no mesh erosions or relapse of original prolapse were detected. Mean operation time was 63 minutes (41 - 97 minutes).

INTERPRETATION OF RESULTS

The laUSA surgical technique for bilateral uterosacral ligament replacement for apical suspension under uterine preservation showed good anatomical results, and so far no severe side effects. Nevertheless, in case of pregnancy a primary caesarean section should be considered.

CONCLUSIONS

Restoration of apical prolapse under uterine preservation was achieved by bilateral USL replacement. This was technically achieved using a semi-circular tunneling device in order to preserve the integrity of the USL, uterus, and uterine vessels with a minimum amount of alloplastic material.

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