

2° MIPS Annual Meeting

Pelvic Floor Dysfunctions in the Mediterranean: Climbing a long hill?

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Session FOUR | Abstract and Video Session I: Female

1 - RISK FACTORS OF STRESS, URGE AND MIXED URINARY INCONTINENCE IN TURKISH WOMEN

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INTRODUCTION AND AIM OF THE STUDY

Urinary incontinence is an important public health problem, affecting millions of women worldwide⁽¹⁾. So that the determination of urinary incontinence risk factors and the development of preventive strategies are important⁽²⁾. The purpose of this study is to determine the risk factors associated with spesific subtypes of urinary incontinence.

MATERIALS AND METHODS

This prospective cross-sectional study was conducted in Urogynecology Department of Zekai Tahir Burak Women's Health Education and Research Hospital between September 2013- July 2014. The study included 958 women with the complaint of urinary leakage and 501 patients who have been admitted to the hospital with other complaints as control group. Turkish version of International Consultation on Incontinence Questionnaire Short Form (ICIQ-SF), urogynecologic and pelvic examination were used for the diagnosis of urinary incontinence. Detailed medical history and data of possible risk factors were collected by face to face interview from the patients to determine the risk factors for urinary incontinence.

RESULTS

Out of 958 patients in the study , 476 (%49.68) of them have stress incontinence, 199 (%20.77) of them have urge incontinence, 283 (%29,54) have mixed urinary incontinence. Early menarche, history of delivery above 4000 gr., asthma, lumbal disc hernia, history of recurrent urinary infection, history of delivery at home, chronic constipation and obesity, family history of urinary incontinence have been determined as factors that increases the risk of urinary incontinence. History of vaginal delivery, first parity before 24 years of age, cystoectocele are determined as specific risk factors for stress incontinence. Smoking, HRT, DM, cuff prolapse are determined as specific risk factors for urge incontinence. HRT, vaginal delivery, first parity before 24 years of age, cystoectocele are determined as specific risk factors for mixed urinary incontinence.

INTERPRETATION OF RESULTS

Early menarche, history of delivery above 4000 gr., asthma, lumbal disc hernia, history of recurrent urinary infection, history of delivery at home, chronic constipation and obesity, family history of urinary incontinence seem to increase the risk of urinary incontinence.As specific risk factors,smoking and uncontrolled DM for urge incontinence and first pregnancy age<24 years for stress incontinence should be kept in mind.

CONCLUSIONS

Urinary incontinence is a common condition that decreases the quality of life and has a high cost for insurance companies. Determining the risk factors are very important for development of protective medical approaches.

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2 - TRANSVAGINAL MESH PELVIC ORGAN REPAIR AFTER FAILURE IN SACROCOLPOPEXY : A SERIES OF 130 PATIENTS

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INTRODUCTION AND AIM OF THE STUDY

The aim of this study is to evaluate the feasibility, the morbidity and the results of reoperation by transvaginal mesh (TVM) to treat recurrent pelvic organ prolapse (POP) following sacrocolpopexy (SC).

MATERIALS AND METHODS

A retrospective single center study covering the period from 2005 to 2014. We collected information of all the patients having been treated by TVM to treat recurrent POP following SC. We then phoned patients to check if they had surgery in another hospital since.

RESULTS

During the inclusion period, 130 patients were operated by TVM for prolapse recurrence following SC. 26% of patients was operated for a first prolapse recurrence between SC and TVM. 13 of these patients had history of 2 or 3 consecutive SC. The TVM took place about 14 years after the PF. The rates of intraoperative or immediate postoperative complication were 0,8%. The rate of vaginal mesh exposure was 2,4%. The rate of re-intervention for recurrence after TVM was of 9% with an average follow up of 36 months. These occurred the untreated compartments in 50% of anterior mesh alone and 83% of posterior mesh alone.

INTERPRETATION OF RESULTS

Prolapse recurrence could occur longtime after the initial SC. Compared to the information obtainable from medical literature, the incidence of complications after TVM in our study is low and comparable to that for TVM without anterior PF. The association between anterior and posterior TVM could limit the risk of prolapse recurrence on the untreated compartment.

CONCLUSIONS

Our results confirm the feasibility, the good results and the stability of recurrent POP after SC treated by TVM in the follow-up of 3 years. TVM is a therapeutic option to be considered for long-term treatment particularly of recurrent pelvic organ prolapse.

REFERENCES (max. 3)

3 - SACRAL COLPOPEXY : LONG-TERM MESH COMPLICATIONS REQUIRING REOPERATION(S)

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INTRODUCTION:

Sacral colpopexy (SC) is a classic procedure used for the surgical treatment of pelvic organ prolapse. Although the procedure boasts excellent success rates, there are risks of complications and a reoperation may be required. The purpose of this study was to evaluate the extent of complications following SC, requiring reoperation(s), and to describe the reoperations performed.

METHODS

A retrospective monocentric study of patients who were operated on following a mesh complication after SC was conducted, at Lille University Hospital, between January 2007 and January 2013. Information relating to medical and surgical history, SC surgical technique, type of complication, and reoperations techniques were gathered.

RESULTS

27 patients required surgery for complications after SC. 19 patients were treated for vaginal mesh exposures (VME), 4 for intravesical mesh (including one with VME), 1 for ano-rectal dyschesia, 1 for spondylodiscitis with a VME, 1 for mesh infection, and 1 for vaginal fistula communicating with a collection in ischio-coccygeal muscle. The median time between the initial SC and the first reoperation was 3.9±5.7 years. The median operating time was 40±95 minutes, and the length of hospital stay was 3.0±3.0 days. 10 patients needed several interventions.

CONCLUSION

This case series provides a description of surgical interventions for complications related to sacral colpopexy. These complications may be serious and occur years after the initial surgery.

4 - THE IMPACT OF DELIVERY MODE AND PARITY ON DEVELOPMENT OF PELVIC ORGAN PROLAPSE AND URINARY INCONTINENCE

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AIM

To investigate the effect of delivery mode and parity number on development of pelvic organ prolapse and urinary incontinence.

MATERIALS AND METHODS

The records of 1500 women who had undergone surgery for pelvic organ prolapse and urinary incontinence between 2007 and 2012 were retrospectively evaluated. After exclusion criteria, 875 women were included in the study. 353 women with the history of pelvic organ prolapse surgery were compared with 129 controls who had no organ prolapse and 201 patients with history of anti-incontinence surgery were compared with 192 controls who had no such surgery, according to age,

body mass index, history of abdominopelvic surgery, obstetric history, parity number, delivery mode and persistence of second degree and more prolapse. Multiple effect of parity number and delivery mode determined as main factors on the development of prolapse and incontinence was analyzed by logistic regression.

RESULTS

The characteristics of organ prolapse group and the controls, as well as anti-incontinence surgery group and controls were statistically similar, except parity number. The risk of having a surgery for pelvic prolapse was higher with increasing number of parity. The highest risk was found in women with a history of 5 and more deliveries. For urinary incontinence, multiparity seemed as a risk factor, however the risk of undergoing incontinence surgery did not increase with increasing number of parity. Delivery mode was not a risk factor for either POP group, or anti-incontinence group.

CONCLUSION

The risk of pelvic organ prolapse increases with increasing number of parity, and also multiparity is a risk factor for urinary incontinence. Thus, women planning more than one delivery should be informed about this concern. Additionally, since the impact of delivery mode has not been shown clearly, we believe the incidence of pelvic floor dysfunction can be decreased with proper obstetric care.

5 - PELVIC FLOOR DISORDERS – A NEW PERSPECTIVE

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INTRODUCTION AND AIM OF THE STUDY

Many patients with pelvic floor disorders present with symptoms other than urinary stress incontinence (USI): uterine prolapse, anterior and posterior vaginal wall prolapse, urgency, frequency, nocturia, faecal incontinence, etc. For these patients presenting with symptoms other than USI our aim was to find the most accurate diagnosis and the best surgical way to correct the determined anatomical defect.

MATERIALS AND METHODS

We examined a group of 234 patients with various pelvic floor disorders. For those with posterior compartment defect we used a new surgical technique repair, consisting in a polypropylene "patch" of 3/2 cm suspended to the sacrospinous ligaments bilaterally and fixed to the cervical insertion of uterosacral ligaments.

RESULTS

57 patients presented with USI. From the rest, only 3% presented just anterior wall prolapse. The great majority associated a certain degree of posterior compartment defect. The anatomical results were satisfactory immediately post operatory and 6 months after. Most urinary symptoms disappeared. The most common side effect was sacral pain, which diminished the following weeks after surgery.

INTERPRETATION OF RESULTS

The correction of posterior compartment is a keystone in treating pelvic floor disorders other than USI. The proposed surgical technique seems to restore well the anatomy giving back the function to the organs involved.

CONCLUSIONS

For patients with pelvic floor disorders other than USI, the surgeon must always look for the posterior compartment defect. The polypropylene mesh with bilateral sacrospinous suspension might offer a convenient solution for these patients. We strongly believe that correcting anatomical damage, we can restore function in high percentage.

6 - CHANGES OF EXTERNAL ANAL SPHINCTER INNERVATION PATTERN AFTER DELIVERY

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INTRODUCTION AND AIM OF THE STUDY

Recent studies demonstrated that there is a significant correlation between external anal sphincter damage (EAS) during vaginal birth and subsequent development of anal incontinence. Functional asymmetry of pelvic floor innervation has been shown to exist. A new non-invasive method – surface electromyography (sEMG) has been shown to be useful to detect the innervation pattern of EAS. Mediolateral episiotomy is commonly used obstetrical intervention, usually performed on the right side.

The aim of the study was to evaluate the changes of the innervation of the external anal sphincter muscle with surface electromyography after delivery with episiotomy.

MATERIALS AND METHODS

Data from 33 primiparous women with subsequent episiotomy at labor were analysed. EMG measurements were performed with a disposable rectal probe at the 28th-34th gestational week and 6-8 weeks after delivery. The innervation zones of single motor units were identified by means of a recently developed signal processing technique. Women were divided into three groups according to the distribution of innervation zones pre partum: innervated predominantly left, symmetric or right.

RESULTS

18 subjects were predominantly innervated left, 6 – symmetric, and 9 – predominantly right. All 33 episiotomies were performed on the right side. In women with a prevalence of innervation zones on the right, a statistically significant reduction of the number of IZs was observed after delivery (Wilcoxon signed-rank test, $p = 0.0156$), while predominantly left or symmetric innervated women did not show any changes in their innervation pattern.

INTERPRETATION OF RESULTS

The innervation pattern is individual and often asymmetric. If the episiotomy is performed on the predominantly innervated side of the sphincter it causes a significant damage to the innervation.

CONCLUSIONS

Obtaining the information about the innervation pattern before delivery could help the obstetricians to choose which side would be preferable for the episiotomy and presumably reduce the incidence of anal incontinence.

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7 - A GRAPHICAL USER INTERFACE FOR AUTOMATIC DETECTION AND VISUALIZATION OF MOTOR UNIT

INNERVATION ZONES OF EXTERNAL ANAL SPHINCTER FROM MULTI-CHANNEL SEMG

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Episiotomy during child delivery may damage nerve branches innervating the external anal sphincter (EAS) muscle and may lead to faecal incontinence at a later age. The number and location of the innervation zones (IZ) of the EAS vary from person to person and the surgeon needs to identify areas less vulnerable to episiotomy. We propose a pre-partum personalized test and a graphical user interface (GUI) for detection and visualization of the IZs of EAS from an intra-anal 16-channel EMG-probe (Fig. 1a) without decomposition of the signals.

METHODS

The GUI consists of menus for acquisition and saving the sEMG, removal of the line interference, automatic detection and interpolation of the bad channels, and detection and display of the distribution of the IZs of EAS using multi-scale filter, edge detection followed by line fitting and end points detection (see Fig. 1c-d).

RESULTS AND CONCLUSIONS

The method was tested on both real and simulated EMG signals with mean square error 0.43 inter-electrode-distances.

From the circular histogram of occurrences of IZs (Fig. 1b), the physicians will be able to select the modality of episiotomy (if any) and minimize the risks of possible obstetric lesions.

The test can reduce the incidence of loss of sphincter control due to child birth and aging.

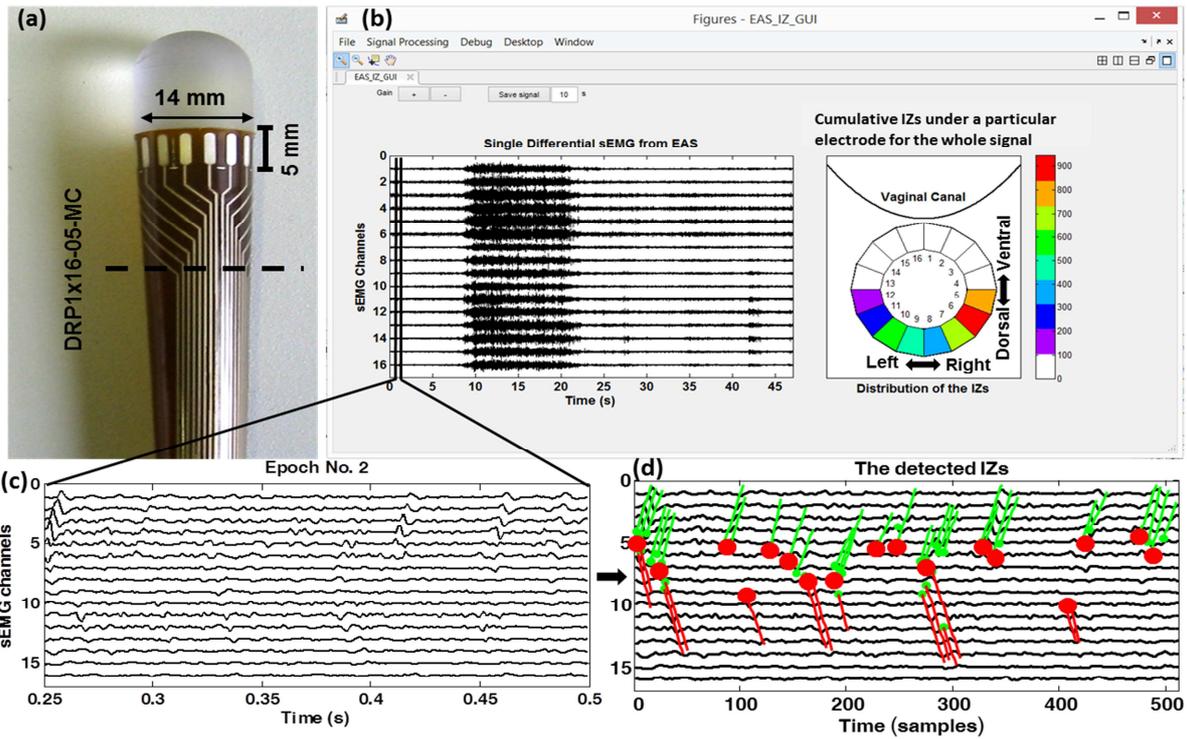


Fig. 1 a) The rectal probe, b) the GUI for visualization of the signal and the automatically computed distribution of IZs, c) one epoch of 0.25 s of the EMG signal d) the detected lines across MUAP propagation and the IZs