Poster 1

THE ROLE OF ULTRASOUND IN THE DEFINITION OF FEMALE URETHRAL SPHINCTER DEFICIENCY: ONE TERTIARY CENTRE EXPERIENCE.

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INTRODUCTION AND AIM OF THE STUDY

To investigate the role of static and trans-rectal ultrasound and to define the characteristics of the urethral-sphincter complex in women suffering from stress urinary incontinence (SUI) and controls.

MATERIALS AND METHODS

From January 2007 to September 2007, 112 women (mean age 60 years, range 35-76), suffering from SUI and referred to our out-patient tertiary Department of Urology, were recruited for this study. All of them, after undergoing a complete clinical urogynaecological examination, were assessed by an urodynamic test (uroflowmetry, filling cystometry, urethral pressure profile and VLPP) and a static and dynamic transrectal ultrasound scan using a 7.5-MHz probe. The parameters studied by static transrectal ultrasound scan, using radial scan, were the antero-posterior and the transverse diameters (mm), the circumference (mm) and the area (mm^2) of the entire urethral-sphincter complex and the area (mm^2) of the smooth muscle. Patients were stratified according to the presence/absence of intrinsic sphincter deficiency (ISD), as resulting from the urodynamic assessment (VLPP □ 60 cmH_2O and MUPC □ 40 cmH_2O), and correlate to the findings of each ultrasound scan parameters. Statistical analysis was performed using Spearman's correlation coefficient and Mann-Whitney test.

RESULTS

Fifty-five (66 %) out of 112 patients were affected by ISD according to the findings of VLPP and MUCP. No statistical differences emerged between circumference and/or area of the entire urethral-sphincter complex between patients with or without ISD (49 ± 5 mm vs. 52 ± 6 mm and 1.6 ± 0.3 mm^2 vs. 2 ± 0.2 $mm^{2,}$ respectively). No correlation between the antero-posterior diameters of the smooth or striated muscles was found between patients with or without ISD (8.8 ± 0.9 mm vs. 10 ± 1.2 mm and 2.2 ± 1.1 vs. 2 ± 1.4). Interestingly, women with ISD presented a marked and statistically significant reduction of the transverse diameter of the smooth muscle (11.7 ± 2.1 mm vs. 15.5 ± 3.1 mm $p < 0.02$).

CONCLUSION

Our findings seem to suggest that women with SUI and ISD do not show morphological changes of the striated component of the urethral sphincter, while they present a reduction of the transverse diameters of the smooth muscle. These preliminary results have to be confirmed by wider series and stratified for other important variables (age, body mass index, co-morbidities) before drawing clinical conclusion.

Poster 2

IS ANTIBIOTIC PROPHYLAXIS USEFUL FOR PATIENTS UNDERGOING URODYNAMIC STUDY

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INTRODUCTION AND AIM OF THE STUDY

URODYNAMIC STUDY (UDS) IS AN ESSENTIAL DIAGNOSTIC TOOL TO INVESTIGATE LOWER URINARY TRACT DYSFUNCTIONS. HOWEVER, THE INCIDENCE OF URINARY TRACT INFECTION (UTI) AFTER THIS INVASIVE PROCEDURE IS ASSESSED BETWEEN 3 AND 13%. THEREFORE, ANTIBIOTIC PROPHYLAXIS IS USUALLY USED TO PREVENT THIS COMPLICATION, ALTHOUGH THE USEFULNESS OF ANTIBIOTIC PROPHYLAXIS FOR URODYNAMIC STUDY HAS NOT BEEN CLEARLY DEMONSTRATED. WE EVALUATED THE EFFECTIVENESS OF ANTIBIOTIC PROPHYLAXIS FOR PATIENTS UNDERGOING UDS IN A RANDOMIZED DOUBLE BLIND CONTROLLED TRIAL.

MATERIALS AND METHODS

SEVENTY WOMEN WITH LOWER URINARY TRACT DYSFUNCTIONS UNDERWENT URODYNAMIC STUDY AND WERE INCLUDED IN THE STUDY. ALL THE PATIENTS SIGNED AN INFORMED CONSENT. UDS CONSISTED OF UROFLOWMETRY, FILLING CYSTOMETRY AND PRESSURE-FLOW STUDY WITH 8FR MULTICHANNEL CATHETER,

URETHRAL PRESSURE PROFILE AND ABDOMINAL LEAK POINT PRESSURE MEASUREMENTS. URINE SPECIMEN FOR URINE ANALYSIS AND CULTURE WAS OBTAINED BEFORE AND 7 DAYS AFTER UDS; URINARY CULTURE □ 10^5 CFU/ML WAS ACCOUNTED AS SIGNIFICANT BACTERIURIA. PATIENTS WITH IMPORTANT BACTERIURIA ON ENTERING URINE TESTING AND THOSE AFFECTED BY NEUROPATHIES AND DIABETES MELLITUS WERE EXCLUDED FROM THE STUDY. THE PATIENTS WERE RANDOMIZED INTO 3 GROUPS: GROUP A (30 PATIENTS) RECEIVED A SINGLE DOSE OF LEVOFLOXACIN (500MG) 6 HOURS BEFORE UDS, GROUP B (30 PATIENTS) RECEIVED PLACEBO TABLET 6 HOURS BEFORE UDS AND CONTROL GROUP C (10 PATIENTS) DID NOT RECEIVE ANY THERAPY.

RESULTS

AFTER UDS, URINARY TRACT INFECTION OCCURRED IN 8.6% (6/70) OF PATIENTS. UTI WAS FOUND IN THE THREE GROUPS AS FOLLOWS: 6.6% (2/30) IN GROUP A, 10% (3/30) IN GROUP B AND 10% (1/10) IN GROUP C ($P>0.05$). THE UROPATHOGENS CAUSING UTI WERE: ESCHERICHIA COLI 66,6% (4/6), PROTEUS MIRABILIS 16.7% (1/6), ENTEROCOCCUS FAECALIS 16.7% (1/6). ALL THE 6 PATIENTS WITH UTI SHOWED OVERACTIVE BLADDER AT UDS; 5 OF THEM HAD UNDERGONE TRANSVAGINAL SURGERY.

DISCUSSION

IN OUR STUDY, THE PREVALENCE OF UTI AFTER UDS IS RELATIVELY LOW; THERE WERE NO SIGNIFICANT STATISTICAL DIFFERENCES AMONG THE THREE GROUPS OF PATIENTS. ESCHERICHIA COLI IS THE MOST COMMON UROPATHOGEN CAUSING UTI. IT IS IMPORTANT TO HIGHLIGHT THAT ALL THE PATIENTS WITH UTI SHOWED OVERACTIVE BLADDER. MOREOVER, OUR OUTCOMES SEEM TO IDENTIFY THE PRIOR TRANSVAGINAL SURGERY AS A RISK FACTOR FOR UTI AFTER UDS.

CONCLUSION

IN OUR STUDY, ANTIBIOTIC PROPHYLAXIS SEEMS TO BE UNNECESSARY IN THOSE PATIENTS UNDERGOING URODYNAMIC EVALUATION. NEVERTHELESS, FURTHER STUDIES WITH LARGER PATIENT POPULATION ARE NEEDED TO OBTAIN MORE ROBUST EVIDENCE.

Poster 3

UTRASOUND EVALUATION OF THE ADJUSTABLE CONTINENCE THERAPY (ACT) IMPLANTS

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INTRODUCTION AND AIM OF THE STUDY

The use of the Adjustable Continence Therapy (ACT™) was introduced in 1999 for the treatment of urodynamic stress incontinence in women. Nowadays main indication for ACT implant is represented by severe Intrinsic Sphincter Deficiency (ISD) in women. The ACT System is made up of two balloons implanted close to the urethra through a perineal approach. The volume of the balloons can be adjusted after implantation through a subcutaneous port in the labia majora (1). Aim of this study was to evaluate the location of ACT devices and the dynamic changes occurring during strain, with the aid of ultrasound (US) using the perineal and trans-vaginal-labial approach.

MATERIALS AND METHODS

A total of 62 female patients, affected by stress urinary incontinence (SUI), were implanted with the ACT device over a seven year period (May 2000 - December 2007). A total of 20 consecutive patients were evaluated postoperatively using US with the perineal approach (probes: Convex 3.5 and Linear 7 Hz) and trans-vaginal-labial approach (probe: endfire).

All the patients complained of various degree of ISD, in 4 cases combined with urethral hypermobility. The patients were supine and the procedure was performed at rest and under maximum strain. At clinical follow-up (range: 6-32 months) all the patients evaluated were dry or showed a significant clinical improvement (PGI-I score = 1-2).

RESULTS

US showed the location of ACT devices with regard to the urethra, the bladder neck and pubis and the dynamic changes occurring during strain. In the coronal plane view, using the perineal approach (probes: Convex 3.5 and Linear 7 Hz), the two devices are clearly evidenced at the side of the urethra. The sagittal plane, using a 3.5Hz Convex probe, shows the position of the devices with regard to the pubis and the bladder neck. The sagittal view using a 7Hz linear probe clearly shows the urethra and the balloons. As the bladder is too deep, it cannot be evidenced by this type of probe, which is for superficial tissues. In the coronal plane view, using the trans-vaginal-labial approach (probe: endfire), the two devices are also clearly evidenced at the side of the urethra. In our series of patients the devices were located at the back of the pubis or caudal to the lower border of the symphysis and were placed posteriorly, laterally or oblique to the urethra axis. At least one of the devices was very close to the urethra wall. In a few cases the devices were placed under the cervical region close to the bladder neck. Under these conditions, with a fixed urethra and an incompetent bladder neck, the

balloons seem to create a block, meaning that the bladder neck does not open during strain.

Moreover, US study is also able to evidence the dynamic features of the devices. In patients with fixed urethra there is no downward sliding of the devices during strain. On the contrary, it is evident in cases of urethral hypermobility sometimes combined with various degree of the bladder neck lowering. It seems that the ACT devices do not offer sufficient support to the urethra, or the bladder neck, as they move along with their host tissues.

DISCUSSION

Stress incontinence treatment with ACT devices can be easily evaluated by means of US scan. The dynamic evaluation during the US studies was able to demonstrate the principle on which restoring of continence is based. We are of the opinion that the main mechanism of the ACT is more one of compression on the surrounding structures, easily achieved as much as they are located close to the urethra wall (middle-urethra). It seems less important the role played by the devices in the stabilization of the cervico-urethral region that keeps its mobility if they are not located too much cranially. Efficacy seems not be affected by their location on the sagittal or coronal plane. However, an extremely cranial position must be avoided due to the risk of the endopelvic fascia perforation and bladder irritation.

CONCLUSION

We are of the opinion that, apart from the conventional X-Ray study, the use of US with the perineal or trans-vaginal-labial approach might well be the first

choice diagnostic imaging technique for the evaluation of ACT implants as it is non-invasive, simple, quick, can be performed in the outpatient division, does not require the use of catheters, does not require a radiologist, it is inexpensive and offers superimposable data to those obtained by other techniques (i.e. CT, MRI). Moreover, US are able to highlight any anomalies that might be present in the device (deflation or dislocation of the balloons).

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Poster 4

EFFECTIVENESS OF PUBOVAGINAL SLING PROCEDURE WITH PORCINE SMALL INTESTINAL SUBMUCOSA (SIS) IMPLANT: INTERMEDIATE-TERM FOLLOW-UP

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INTRODUCTION AND AIM OF THE STUDY

The pubovaginal sling (PVS) is a popular surgical procedure for therapy of stress urinary incontinence (SUI). In the past the use of autologous rectus fascia showed satisfactory results in the long-term but with the need to perform a large abdominal incision. The introduction of synthetic materials allowed to offer the advantage of aesthetic results with a short hospital stay but with the risk of urogenital tract erosion. Recently, the use of cross-linked collagen isolated from porcine sources as small intestinal submucosa (SIS) has become available in the surgical procedure for treatment of SUI (1,2).

At present, few data are reported in literature on intermediate-term follow-up in patients who underwent PVS with SIS including a patient's quality of life (QoL) evaluation.

We report intermediate-term results with reference to QoL and complications in 48 consecutive patients with SUI treated by PVS with SIS.

MATERIALS AND METHODS

Between January 2000 and December 2003, we reviewed retrospectively the files of 48 consecutive patients (mean age: 66 yrs, range 41-82 yrs.) (tab.1) with documented SUI who underwent PVS with SIS placed under the middle urethra in tension-free fashion or under the bladder neck, in a single centre. All patients were revised for evaluation of QoL in September 2006 (mean follow-up: 43.4 months, range 33-80 months). The patients were invited to fill-in a validated Italian version of King's Health Questionnaire (KHQ) to evaluate the QoL with the help of a non-partisan health care provider. Both physician and patient were blind-tested. After assessing the questionnaire data, the patients were stratified into two groups: cured or improved (Group A), unchanged or worsened (Group B) based on stress test evaluation and on subjective report of *de novo* urgency and mixed incontinence.

RESULTS

32 of 48 (66.7%) patients filled up the QoL questionnaire. The operative complications were haemorrhage in one case and infection in another one. 26/32 patients (81.2%) resulted dry or improved. In 6/32 patients (18.8%) PVS failed with the appearance of *de novo* urgency in 5/6 (83%) of patients and mixed incontinence in 1/6 (17%) of patients. The results of KHQ questionnaire in all groups are reported in tab.2.

Table 1: clinical data of 32 patients

Number of patients	48
Replied (%)	32 (66.7)
Median Age at procedure (range)	66 (41-82) yrs
Parity (range)	1.6 (1-3)
Previous gynaecological surgery (%)	2/32 (6.6)
Previous hysterectomy (%)	3/32 (9.4)
N° of pads/day (mean±SD)	2.6±1.1
Mean follow-up (range)	43.4 months (33-80)

Table 2: KHQ score (mean ± SD)

KHQ domains	**Group A**	**Group B**
role limitations (RL)	42.3±23.2	54.2±18.8
physical limitations (PL)	34.6±34.6	72.2±25.1
social limitations (SL)	25.0±26.4	61.1±31.0
personal relationship (PR)	19.2±31.2	52.7±37.1
emotional problems (EP)	14.9±23.3	48.1±34.9
sleep and energy disturbances (SED)	21.8±38.8	30.6±61.8
severity measure (SM)	9.4±23.2	481±39.5
general health perception (GHP)	9.4±23.2	48.5±39.5
incontinence impact (II)	14.6±14.2	63.3±35.9

DISCUSSION AND CONCLUSIONS

Our series demonstrated an improvement of QoL in group A in comparison with group B. These data seem to show that this surgical procedure with the employment of SIS is effective even if further trials are needed to confirm this trend in the long-term.

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Poster 5

MICTURITION DISORDERS AND DISABILITY IN PARKINSON'S DISEASE . TWO YEARS OF OBSERVATION ON 62 PATIENTS WITH THE APPLICATION OF UNIFIED PARKINSON'S DISEASE RATING SCALE

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INTRODUCTION AND AIM OF THE STUDY :

The Parkinson's disease (P.D.) has a progressive evolution characterized by muscular tonus bother ,the motility with bradykinesia and other symptoms involving the psychic and vegetative functions. The micturition disorders, in these patients , have a frequent statistic evidence , but often aren't mentioned in the Neuro-Urological studies. The impact on evolutive process of the disability and on the Unified Parkinson's Disease Rating Scale (U.P.D.R.S.) that estime it, is notably emphasized. Therefore on propose a evaluation across this instrument the incidence and the quality of micturition disorders of parkinson's patients.

MATERIALS AND METHODS : We have included in the study 62 patients , age range 29-78, with a diagnosis of Parkinson's disease probable according to Gelb's principle of both sex with and without pharmacologic treatments ,cancer free.

At first time we have administer to all patients the International prostate symptoms score (IPSS) and filled in a urological anamnesys , performed a

ultrosonography , a Uroflowmetry and compiled all parts of UPDRS . The patients with positive anamnesys have performed urodynamic tests . The entire process has been performed again after one years and then after two years.

RESULTS : We have included in the study , 62 patients ,45 male and 17 female, (age range 29 and 78 years old) with an UPDRS comprised between 22 and 107 points . Only 37 of them (29 male and 8 female) referred urological symptoms secondaries to these urodynamics findings (Table I)

Paz..	Iperatt.Det.	Areflessia det	Dissinergia D-S
Femmine 8	5	2	1
Maschi 29	16	4	9

Table I

There weren't any correlation statistically valid between the progressive psychical deterioration and the micturition disorders in anyone of the patients , but ,on the other hand, there were a tightened relation between the "impairment" grade of the daily life . After 12 month from the first revelation, 6 of the 25 patients (all male) that at the beginning of the study hadn't referred dysuria ,now, presented urodynamics findings of Bladder sphincter dyssinergia. All this cases had a medium range of the disease's starting point quite brief (3 years). So, these signs was clearly related to the disease's progression. After two years 43 patients on 62 ,reported a dysuria supported

by Urodynamics alterations(tab II) while UPDRS had a range raise of 44-116.

	Iperatt. Detr.	Areflessia	Dissinergia V.S.
Femmine 8	5	2	1
Maschi 35	16	4	15

DISCUSSION

The UPDRS, is a evaluation scale divided in 5 sections. The first four parts are used to describes the effective impact on the psyche of the medicine, their collateral effects ,the capacity to influence the normal daily actions and ,the specific effects for the Parkinson clinics symptoms (modifications operated by the Columbia scale) .The fifth section is composed by the stadiation modified by Hohen Yahr. The UPDRS therefore can join in a unique score other valid scale and cooperate to open up the possibility to a study for Metanalysis . From the systematic application of the UPDRS and the Neurourological screening on a population of patients affected of PD resulted has resulted extremely clear like the micturiton disorders have a important aspect in the degenerative process of disability. The urodynamics variability is due to a differents anatomopathologic damages.

CONCLUSION

Through Our study we underline that the micturition disorders in a patient affected by Parkinson it's not so rare and that this evidence is directly connected to a basic neurological pathology. It has an important and early effect on the patient's disability with a substantial worsening of the clinic status and all that also reflects the result of UPDRS . It Is, always,

recommended ,in this patients , a prophylaxis of the urological disorders for a possible reduction or to slow down the degenerative effects on the disability .

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Poster 6

Stress urinary incontinence after radical prostatectomy. Transrectal ultrasound guided implant of ProACT system

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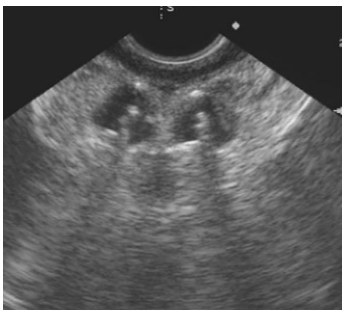
INTRODUCTION AND AIM OF THE STUDY

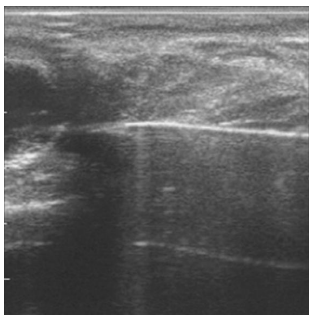
We evaluate the feasibility, safety and advantages of ProACT system implantation by trans-rectal ultrasound guidance rather than by fluoroscopy. Trans-rectal ultrasound vision allows the operator to focalize anatomical structures in a well defined way in order to allocate the balloons beside the bladder neck, exactly at the same level bilaterally, avoiding urethral, bladder and rectal injury.

MATERIALS AND METHODS

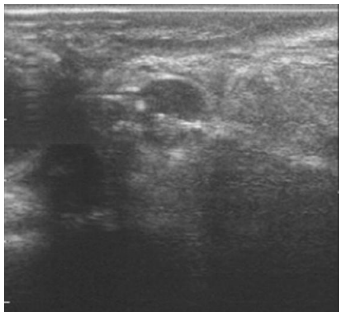
We performed trans-rectal ultrasound guided procedure in 4 patients (mean age 69,2 years; range 59 to 72) with mild to severe stress urinary incontinence after retropubic radical prostatectomy. All patients were evaluated preoperatively with urodynamic study. No bladder overactivity was revealed. We used an ultrasound biplanar probe (longitudinal 7,5MHz and transversal convex 5MHz). After local anesthesia by fine needle infiltration of the perineal and perianastomotical tissue with lidocaine, a careful study of the anatomical structures was performed in order to identify bladder neck, anastomotical tissues and its deformity prior and after insertion of the urethral

catheter with longitudinal and transversal probe and a filling of bladder with 200 ml of saline solution. Then, under the guide of a longitudinal probe, the operator inserted the trocar laterally to the urethra until the tip reaches the bladder neck. At this point the trocar obturator was removed and the first balloon inserted, allocated laterally to the bladder neck and filled with 1 ml of isotonic contrast solution (for future Xray control). The same operation was performed contralaterally. Transversal vision allows the operator to evaluate the right allocation of both balloons. Finally, a scrotal pouch was performed by a subdartoic tunnel to allocate the two ports of the device used to fill the balloons if required at continence evaluation 3 months after operation.

Trocar insertion 



1st balloon



2 balloons in site

RESULTS

The ProACT system was successfully implanted in all cases without perioperative complications. Time needed to complete the overall procedure was 15 to 30 minutes. All transrectal ultrasound studies performed during the mean follow-up at 2 months confirmed the exact location of the devices. Preoperative VLPP was 51 cm H_2O (range 54-42), post operative was negative in 3 patients (max pressure 92 cm H_2O) and positive in 1 (77 cm H_2O). Full continence was present in 3 cases and incontinence in 1 case that might need further filling of balloons three months after surgery.

DISCUSSION

Transrectal ultrasound guide implant of ProACT is easy to perform, and safer than Xray guided approach. Furthermore, this technique is cheaper for the Institution because of a short hospital stay and safer for the patient who does not need Xray exposure.

CONCLUSION

ProACT system implantation is feasible using transrectal ultrasound as guidance. Trans-rectal ultrasound vision enables excellent imaging of all anatomical landmarks during the entire procedure and provides considerable advantages over fluoroscopy in terms of safety and accuracy.

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Poster 7

Pro-Act device in the treatment of male stress urinary incontinence: our experience

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INTRODUCTION AND AIM OF THE STUDY

Stress urinary incontinence (SUI), when presenting after radical prostatectomy, radical cystectomy or prostatic enucleation or resection, is hardly affecting patient's quality of life (1). Pelvic floor training has poor efficacy; intra-urethral bulking agents, used in moderate kinds of urinary incontinence, have low success rate, too (2). Artificial sphincter, gold standard in the treatment of SUI, has quite a high rate of complications.
Pro-ACT (prosthesis-Adjustable Continence Therapy) is a device intended to replace previous options, in the treatment of light and moderate SUI (3).
Our experience in the treatment of male SUI by Pro-ACT is reported.

MATERIALS AND METHODS

From November 2004 to November 2007, 9 male patients affected by SUI have been treated by Pro-ACT.
Two balloons are put on each side of the vesico-urethral anastomosis or prostatic apex by a perineal percutaneous approach, under fluoroscopic control. Each balloon is connected to a titanium "door" put under the scrotal skin that is accessible for future balloon volume regulations by small needles, under local anaesthesia. The two balloons create bilateral para-urethral compression. By swelling the balloons, a balance between continence and outlet is achieved.

RESULTS

Mean age of the 9 male patients was 70 (range 67-83) at the time device implantation.
All patients were affected by SUI following external urethral sphincter damage. Average VLPP was 40.5 cmH2O (range 30-50 cmH2O). Average number of daily pads was 3 (range 2-5). SUI followed TURP in 1 patient, retropubic prostatic adenomectomy in 1, radical prostatectomy for prostatic cancer in 6 (pT2 N0 Mx)), radical cystectomy and ortotopic neobladder in 1 (pT0 N0 Mx)).

All patients had received unsuccessful pelvic floor training. Seven patients, because of concomitant urgency incontinence, had received antimuscarinic drugs for at least 3 months, without benefit.
Average number of balloons fillings (1 cc every time) was 5 (range 0 - 8), before achieving satisfactory continence level.
Effect of the device was evaluated above all according to the reduction of number of daily pads.
Treatment was successful in all 9 patients: 6 regained complete continence, 3 reduced average number of daily pads from 3 to 1.
Available median and average follow-up is 22 months. One patient, after 24 months of restored continence, had a relapse that has been successfully treated by further filling each balloon with 1 cc.

CONCLUSION

Pro-ACT is a simple, safe and effective treatment. Efficacy is long-lasting (according to literature and to our experience) and may be regulated over time.

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Poster 8

Pelvic floor disorders and hypothyroidism: is there an association?

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INTRODUCTION AND AIM OF THE STUDY

Many connective tissue disorders are associated to hypothyroidism. Aim of this retrospective study is to investigate the association between hypothyroidism and pelvic floor disorders.

MATERIALS AND METHODS

The study enrolled 201 patients: 101 patients were studied in the Pelvic Floor Center (Group A); 100 patients in the Menopause Disorders Center (Group B). The inclusion criteria for both groups were: BMI between 25 and 29, years of menopause ≥ 2, age between 52-68, pluriparity and no previous pelvic surgery. All of them were investigated specifically about their thyroid hormon status. The suspension status of pelvic organs in all the patients was analysed and scored according to the Half Way System. The prevalence of hypothyroidism was calculated for both groups.

RESULTS

Twenty-one patients of Group A suffered from hypothyroidism (20.8%); ten patients belonging to Group B had thyroid hypofunction (10%). The statistical analysis to establish the prevalence of hypothyroidism was conducted with χ^2-test (uncorrected 5.01; $p = 0.02$; Yates corrected 4.18; $p = 0.04$).

DISCUSSION

The thyroid hormone is necessary to cell metabolism of all organic systems. Its deficiency is manifested by a systemic disease with insidious onset. The myopathy associated with hypothyroidism can present muscular weakness, slowness of mental and locomotor activities. These alterations can be revealed even in pelvic floor weakness. Moreover, pelvic floor muscles share with mitral valve the collagen type I and III; the prevalence of mitral valve prolapse in chronic lymphocytic thyroiditis and nongoitrous hypothyroidism has been studied and confirmed by Brauman in 1988. Many data in literature revealed the association between hypothyroidism and connective tissue disorders. The role of FT3 and FT4 in the collagen metabolism should be deeply studied in order to explain these many associations.

CONCLUSION

The difference between the incidence of hypothyroid women in Group A and Group B is statistically significant. Further studies are needed: a) to confirm this observational data; b) to understand the possible biochemical links between thyroid hormones and pelvic floor.

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