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Li Marzi V[1], Del Popolo G[2], Filocamo M T[1], Villari D[1], Della Melina A[1], Alessandrini M[1], Delle Rose A[1], Nicita G[1]
1. *University of Florence,* ***2.*** *Neurourology, Spinal Unit, Aou Careggi, Florence*

IMPROVEMENT OF STORAGE SYMPTOMS AFTER MESH REPAIR OF ANTERIOR VAGINAL WALL PROLAPSE

Hypothesis / aims of study

In the field of female pelvic organ prolapse (POP) the relationship between anatomy, function and quality of life (QoL) required further researches, particularly if we consider the POP surgery impact. Surgical repair remains the gold standard treatment for women with anterior vaginal wall prolapse even if the effects of surgery on overactive bladder syndrome are still unknown. We evaluated women with anterior vaginal defect and urgency with or without urinary incontinence which underwent to prolapse mesh repair.

Study design, materials and methods

Between December 2004 and May 2007, 116 patients affected by anterior vaginal wall prolapse underwent to anterior transvaginal repair with mesh. All the patients were pre-operatively assessed using urogynecologycal history, POP-Q system, urodynamic tests and bladder diary. All patients are asked to complete the Urogenital Distress Inventory short-form (UDI-6) and the Incontinence Impact Questionnaire short-form (IIQ-7). All the women underwent to anterior repair by transvaginal placement of a monofilament polypropylene mesh. The prosthesis is fixed anteriorly to the arcus tendineus levator ani muscle and to the uterine cervix posteriorly. After surgery all the patients were evaluated with physical examination (3, 6, and 12 months), bladder diary, UDI-6 and IIQ-7 (6 months). Urodynamic assessment was performed only in patients with urinary incontinence and/or overactive bladder symptoms at least 3 months after surgery. Pre and post-operative bladder diary data (daytime frequency, pads employed) and questionnaires data were compared using the Wilcoxon test.

Results

Before surgery, all the 116 recruited women had a POP ≥stage II. 24 (20.6%) out of 116 patients had only anterior vaginal wall prolapse without incontinence or overactive bladder symptoms. 40/116 (34.4%) had stress urinary incontinence (SUI) and 1 (0.8%) had a previous anterior colporraphy. We consider for this study the remaining 51 patients which pre-operatively had urgency/frequency symptoms with or without incontinence. The mean age was 65.3 years (range 49-83). Before surgery 29 out 51 patients (56.8%) had mixed urinary incontinence (MUI), 19/51 (37.2%) women had urgency/frequency without incontinence and 3 (5.8%) had urge incontinence (fig. 1). The mean follow up is 17.7 months (median 17; DS±6.8; range 3-29). After surgery 37 (72.5%) patients were subjectively asymptomatic, while 14 (27.5%) reported LUTS. Urodynamic investigations were performed from 3 to 10 months after surgery. 6 (11.7%) patients had MUI, 3 (5.8%) urgency/frequency without incontinence, 3 (5.8%) urge incontinence, and 2 (3.9%) pure urodynamic SUI (fig. 2). 39 (76%) women reduced significantly the daytime frequency (>11 versus <8 voids per day) (p<0,01). The mean number of pads used daily changed from 1.3 to 1.1 (p=0.35). Pre and post-operative data on questionnaires utilized are reported in table 1. In 5 out of 51 patients (9.8%) we observed a anterior vaginal wall prolapse relapse, in 1 patient an anterior and central defect was detected. We do not observe any mesh related complications such as extrusion or infection.

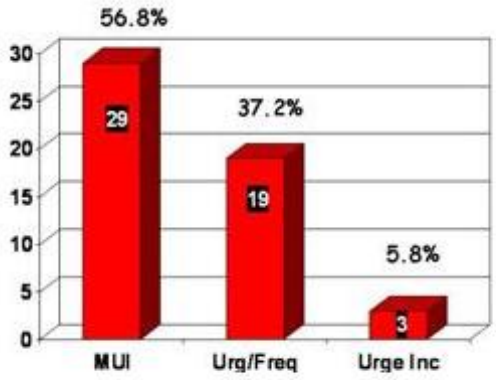

Fig.1

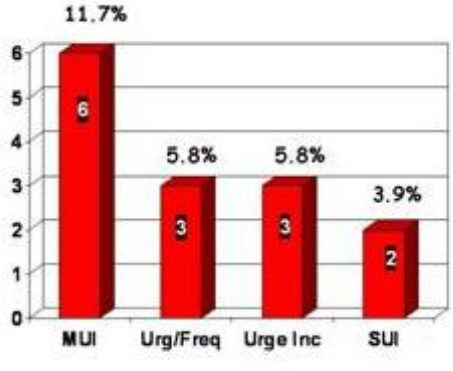

Fig.2

Fig. 1: Before surgery urodynamic detrusor overactivity was demonstrated in 13 out of 29 patients with MUI, in 7/19 with Urg/Freq symptoms and in 3/3 with urge incontinence.
Fig. 2: After surgery14 patients reported LUTS. Urodynamic detrusor overactivity was demonstrated in 4 out of 6 patients with MUI, and in all the 6 patients with Urg/Freq symptoms and urge incontinence. Urodynamic SUI was confirmed in the 2 remaining patients.

Questonnaire	Mean pre-op score (range)	Mean post-op score (range)	p
UDI-6	9 (2-16)	3 (0-14)	< 0,02
IIQ-7	8 (3-21)	4 (0-15)	< 0,03

Tab. 1: Subjective symptoms and QoL evaluation significantly improved after surgery.

Interpretation of results

The correction of anterior vaginal wall defect with mesh provides excellent anatomic results. Failure rate was 11.7%. We observed a significant decrease of both the MUI (56,8% vs 11,7%) and the urgency/frequency symptoms without incontinence (37,2% vs 5,8%). No de novo urge incontinence was demonstrated.

Concluding message

Despite the use of synthetic material the correction of anterior vaginal wall defect with mesh may improve the irritative urinary symptoms also in the patients affected by overactive bladder syndrome.

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Is this a clinical trial?	**Yes**
Is this study registered in a public clinical trials registry?	**No**
What were the subjects in the study?	**HUMAN**
Was this study approved by an ethics committee?	**No**
This study did not require eithics committee approval because	**This is an observational retrospective study**
Was the Declaration of Helsinki followed?	**Yes**
Was informed consent obtained from the patients?	**Yes**