PERSISTENT URINARY RETENTION AFTER TVT: CASE REPORT AND COMMENTS

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SUMMARY: Urinary retention after mid-urethra sling suspension is a challenging problem for the surgeon: the problem of cutting or removing the sling is under debate and the recurrence of urinary incontinence represents a troublesome complication.

RIASSUNTO: La ritenzione urinaria persistente dopo interventi di sling medio-uretrale rappresenta un problema importante per il chirurgo. La scelta se tagliare o rimuovere la sling è ancora controversa e la recidiva di incontinenza urinaria rappresenta un problema aggiuntivo.
INTRODUCTION

Long lasting urinary retention superior to 100 – 150 ml. at each micturition after a mid-urethra sling operations is one of the most disappointing events both for the patients and for the surgeon: discomfort and poor quality of life are really important in obstructed patients, superior than in incontinent ones. Ulmsten in 1999 (1) suggested to move downwards the tape after 48 hours if the patient cannot urinate. This manœuvre must be tried in such cases, but success is rare. Other Authors suggest to cut the mesh from 2 to 4 weeks after the operation if micturition is yet impossible and if that sometimes obstruction itself acts as an inhibiting factor for detrusor contractility, so that the a pressure-flow study confirms the obstruction instead of detrusor ipoactivity (we must remember separation between the two pathologies sometimes may be difficult).

The first problem is therefore how extensive the removal of the tape must be to ensure a regular micturition and the second one is how to maintain continence after the manœuvre. In my opinion the sling must be removed for 2-3 cm., that is the whole part that compresses the urethra, not to risk to submit the patient to a new procedure to achieve the goal of a good flow: during the procedure it is advisable to pull down the urethra to check if a good mobility has been reached.

At the end, what can the surgeon suggest if the patient becomes again incontinent ? This is a big challenge,
not yet resolved by most Authors. We describe here a case report, describing the pathway followed to solve the problem.

**CASE REPORT**

The patient D.P, aged 59, who had undergone vaginal hysterectomy in 1995, was submitted to TVT in March 2006 in a primary center, for stress urinary incontinence due to urethral hypermobility: complete urodynamic pre-operative data are not available, but uroflowmetry and cystometry are reported as normal. Complete urinary retention lasted one month after the operation. A pressure-flow study performed 40 days after TVT (April 06) showed:

- Peak flow: 7.0 ml/sec
- Average flow: 3 ml/sec
- Voided volume: 150.1 ml
- Flow time: 43.6 sec
- Opening detr press: 28 cm/H2O
- Pdet max: 31 cm/H2O
- URA: 20.3 cm/H2O
- Ur. Residual: 109 ml.

The diagnosis, following Blaivas criteria (2-3), was that of urethral obstruction; cystometry was completely normal.

Intermittent self catheterisation showed a persistent high residual, so that TVT removal was performed in our Gynaecological Unit 1 month later (May 06). The tape was removed until the pubic bone and a good urethral mobility was achieved. The patient succeeded rapidly to urinate

**CASO CLINICO**

La paziente D.P. di anni 59, sottoposta in precedenza nel 1995 ad isterectomia vaginale, era stata sottoposta a TVT per incontinenza urinaria da sforzo con ipermobilità uretrale presso un altro centro di 1° livello nel Marzo 2006: i dati urodinamici completi pre-operatori non erano disponibili, ma la flussometria e la cistomanometria erano riportate normali. La ritenzione urinaria completa persistette 1 mese dopo l’intervento. Uno studio pressione flusso effettuato 40 gg. dopo la TVT dimostrò:

- Flusso massimo: 7.0 ml/sec
- Flusso medio: 3 ml/sec
- Volume vuotato: 150.1 ml
- Tempo di flusso: 43.6 sec
- Press di apertura detr: 28 cm/H2O
- Press detr. massima: 31 cm/H2O
- URA: 20.3 cm/H2O
- Residuo urinario: 109 ml

La diagnosi secondo i criteri di Blaivas (2-3) era quella di ostruzione urinaria. La cistometria era completamente normale.

La cateterizzazione intermittente dimostrava un residuo post-minzionale persistentemente elevato, per cui 1 mese più tardi (Maggio 2006) la sling fu rimossa presso la ns. U.O, fino a giugere all’osso pubico e ad ottenere una buona mobilità dell’uretra. La pa-
normally, without a significant post micturition residual, but 30 days later she became again incontinent: the patient had been correctly informed about this possibility.

In September a new urodinamic investigation was performed: cystometry was normal (bladder capacity 462 ml, normal sensibility and detrusor pressure), flowmetry showed a Qmax of 66.4 ml/sec, a voided volume of 497 ml, a voiding time of 16 sec without residual. VLPP was 69 cmH20.

In October a Burch colposuspension was performed: these procedure was chosen because in our opinion there was an important urethral sphincter defect. A little strip of prolene was found behind the pubic bone on the left side and removed; 2 non absorbable stitches were passed on both sides in the vaginal wall lateral to the bladder neck and more distally following the standard procedure. The post-operative history was uneventful: after 3 days the urethral catheter was removed and a normal micturition was obtained without significant residual.

One month later the patient resulted completely continent, with a normal micturition diary and no problem affecting her low urinary tract.

DISCUSSION

The problem of resolving urinary iatrogenic obstruction is still under debate: the risks of urethrolysis are important: uncorrect diagnosis, urethral lesions and subsequent fistula, ziente riprese rapidamente a mingere regolarmente, senza residuo significativo, ma 30 giorni più tardi si manifestò la recidiva dell’incontinenza da sforzo, eventualità di cui la paziente era stata correttamente informata.

Una nuova indagine urodinamica effettuata in Settembre 2006 dimostrò: cistometria normale (capacità vescicale 426 ml, sensibilità e pressione ddetrusoriale normali,) flussometria con Q max 66.4 ml/sec, volume vuotato 497 ml, tempo di flusso 16 sec, senza residuo. Il VLPP era pari a 69 cm/H20.

In ottobre è stato praticata una colposospensione sec. Burch: questo approccio fu deciso in quanto vi era a nostro parere una importante componente di insufficienza sfintero-uretrale. Una piccola striscia di prolene fu repe-rita e rimossa dietro il lato sinistro del-l’osso pubico; 2 punti non riassorbibili per lato furono posizionati sulla parete vaginale a livello del collo vescicale e più distalmente secondo la tecnica classica. Il decorso post-operatorio è stato del tutto regolare: il catetere è stato rimosso dopo 3 giorni e la pa- ziente ha ripreso ad urinare regolarmente senza residuo. Un mese più tar-dì la paziente rimaneva perfettamente continentine senza alcun problema a ca-rico delle basse vie urinarie.

DISCUSSIONE

Il problema della risoluzione dell’ostruzione uretrale iatrogena è tutto-ra controverso: i rischi dell’uretrolisi sono significativi: diagnosi errata, le- sioni uretrali e conseguente fistola,
insufficient urethral mobility and persistent obstruction and, at the end, sphincter deficiency, due to denervation and/or devascularization. Another problem is the timing of reinsertion, not too fast to wait for stabilization of bladder and urethral function, not too late to avoid detrusor deterioration. Most Authors think that the optimal timing range from 2 to 6 months, considering the influence of a few factors like the presence of urinary tract infections, the spontaneous improving of micturition or not, patient’s discomfort, age, etc. In my opinion it is not advisable trying to solve obstruction with a wide urethrolysis and to prevent recurrent incontinence in one operation, because, if the patient remains obstructed, you cannot know if urethrolysis has been insufficient or a new obstruction has been created with the second operation: the problem could be unresolvable. I think that it is much better to solve completely outlet obstruction and to wait 2 or 3 months before eventually performing another procedure: a good number of patient don’t need any other operation ad they remain still continent after urethrolisys.

The choice of the second operation is of outmost importance and depends on urodynamic and clinical assessment. In the case here discussed there was some risk of urethral sphincter defect so that Burch colposuspension was performed. The alternative choice was TOT, but we thought that it could be unsuccessful.

Looking to the literature, Barber and Coll. in 2006 (4) report a ran-
domized comparison between TVT and TOT stating that few urethrolysis were necessary in their experience after TOT. Deffieux and Coll (5) suggest an immediate reintervention if a persistent obstruction is present, reporting that less than 30% patients become incontinent after the procedure. Sokol and Coll. (6) showed a 11.3% of urinary retention after TVT, with a 4.9% of urethrolysis (much more than in our experience), being the previous history of incontinence surgery the only predictor of urinary retention. A complicated case of urinary retention was described by Margulis and Coll in 2004 (7) requesting several operations to be solved.
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