A difficult case

Edited by Nissrine Nakib and Federico Cavallari

A series of difficult cases in pelvic floor diseases are presented with an educational purpose. The proposer describes symptoms, clinical findings and management plans. Opinions and suggestions of a number of Colleagues are reported. In the next issues of Pelviperineology, together with new difficult cases, results and further comments on each case will be published at three and six months follow up.

Severe stress incontinence after the third sling

Clinical Data: This is a 52 year old female with a history of urinary incontinence. She has mainly stress incontinence. In the past she had a transobturator midurethral sling in October of 2010, then periurethral bulking in May of 2011, and most recently a TFS midurethral sling in December of 2013. After her last sling she was dry for about a week and a half then developed severe stress incontinence again.

On exam she has no urethral hypermobility but florid stress incontinence. I performed a simulated procedure supporting the periurethral ligament. When I supported it on the right firmly it did seem to keep her from leaking to some degree but not entirely. When I did it on the left it helped to a much lesser degree.

Urodynamic Testing showed: 1) Large bladder capacity, 900 mL; 2) Excellent bladder compliance; 3) Stress urinary incontinence; moderate volume stress leak at Pabd 156 cm H2O at a volume of 319 mL; 4) Weak voiding detrusor contraction of Pdet ~9 cm H2O heavily augmented with abdominal straining with peak voiding Pabd >130 cm H2O. Flow was intermittent associated with intermittent abdominal straining and Valsalva; PVR ~120 mL.

On cystoscopic evaluation the urethra was normal, except for open bladder neck. The bladder was with 1+ trabeculation. No tumors, diverticulae, or stones. Bilateral u/o's were effluxing clear urine. The cystoscope was then withdrawn. The patient tolerated the procedure well.

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Comments / Discussion

I'd probably recommend a transvaginal urethrolysis and an autologous fascial sling at the bladder neck. There is a reasonable chance she will need to perform ISC to empty after, so she should agree to that. It is possible that the urethrolysis will restore enough mobility to allow for improved emptying even after the fascial sling.

Steven Siegel
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Actions

1. Exclude tethered vagina. If the TOT penetrates the lateral part of pubo-cocygeus, the urethra is pulled open when the patient gets out of bed. If this is so, you need to remove at least 2cm of tape either side of urethra to prevent re-attachment with a new sling. If she does not leak immediately getting out of bed or off a chair, look for the 2nd cause, fibrosis of the old scar.
2. A loosely applied sling fibroses and keeps the urethra in a partly open state. Therefore, the 1st rule after a failed sling is to remove the old sling. If this is not done, the 2nd sling has to compress the fibrosis before it can work. This explains the reduced cure rate with a 2nd sling. This fits with fibrosis holding the urethra open. The musculoelastic closure me-chanism acting around the PUL cannot work if a fibrosed tape is forcibly keeping the urethra open.
3. Obstructed micturition symptoms. If these appeared after bulking or after TFS, then the sling may be too tight or maybe the bulking is preventing the funneling required to open out the urethra during micturition. If after TFS, the problem will disappear after the urethrolysis. If symptoms appeared after the bulking, you may need to extend the dissection to bladder neck as part of the "urethrolysis". Management is the same for both conditions.

I agree with Steve about “transvaginal urethrolysis" as a critical 1st step. I take this to mean dissecting the old tapes 1-2 cm clear of the urethra midline to lateral and freeing the bladder neck also. I do not agree about fascial bladder neck slings, as these offer no advantage to a well-placed midurethral sling and do not address the geometry of closure.

I would do the operation under LA if possible, or LA augmented by light spinal. After the dissection, I would do another "simulated operation": unilateral pressure immediately behind Pubic Symphysis. I always use this LA methodology for difficult failed cases.

The "simulated operation" should control the urine loss on coughing. If so, depending on the state of the urethra, you can proceed to a 2nd midurethral retropubic sling. TOTs usually work, but they are not physiological and do not address ISD as well.

If the urethra is very thin, it would be prudent to insert a layer of SIS or strip of vagina denuded of epithelium to protect the urethra prior to inserting the sling around such a graft. I see no benefit with a bladder neck sling as this can only prevent the funnelling so necessary to decrease the resistance, a prerequisite for normal micturition.

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Did you do an ultrasound exam on the position of the tapes? In my experience it is important to know whether the tapes are positioned correctly or not.

Burghard Abendstein
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I'd recommend a Burch colposuspension procedure with 2 stitches on each side. No need to perform an urethrolysis. From now on every intervention that will be done transvaginally would increase the risk of pipeline urethra which is more devastating than her present condition.

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Doing the perineal ultrasound, you could also look permanent opening of the urethra, which could reflect tethered vagina, a finding frequently seen in preoperated patients especially with bulking agents.

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I fear obstruction with the colposuspension. Get out the TOT, bulking agent, polypropylene and fibrotic tissue as much as possible - maybe there is some spare vaginal tissue of a little cystocele to cover the defect - wait at least three months and then put in a TVT or another TFS.

Alfons Gunnemann
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If the primary transobturatoric tape is positioned too caudally it can fix the urethra open with the effect of continuing stress urinary incontinence. Then the second tape (in this case TFS) can fail. So I agree with Peter and Steve to do a careful urethrolysis to free the urethra from the transobturatory tape. Intraoperatively do simulated operations (fill up the bladder and press from the abdomen against the bladder) and look, if unilateral elevation at midurethra will prevent leakage. I also would insert then a retropubic sling at midurethra.
We did some cases like that with good results. Always remember that the pubourethral ligament is very much important for stress continence and that it inserts retropubic.

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1- Despite all we think, we still don't know the full picture of pathophysiology of urinary incontinence and especially recurrent/persistent incontinence
2- I agree that the first task is to do a urethrolysis. I am of the opinion that you would need to let her heal from urethrolysis for about 3 months and then re-evaluate her. If you have video-urodynamics, I would highly recommend it- as it will give you 'visual' information about the open bladder neck, urethral kinking (from previous mid-urethral slings), etc.
3- Also, pay attention to ventral surface of the urethra- as this is where the PUL exist. As such, and pending on your re-evaluation results, an anterior approach (modified Burch) where you could bring urethra closer to dorsal surface of symphysis pubic could also be entertained.

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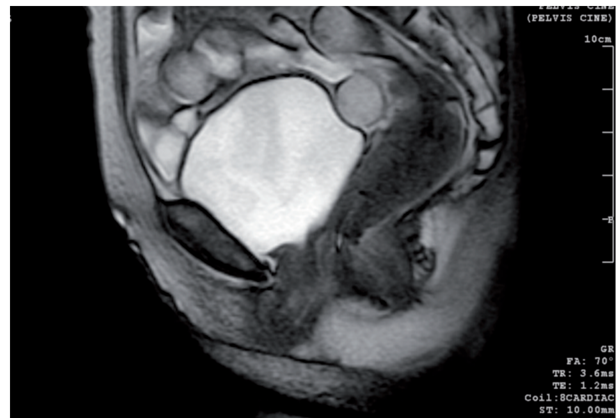

Figure 1. – Pre-TVT.

Let me show you, the example of "if the primary transobturatoric tape is positioned too caudally it can fix the urethra open with the effect of continuing stress urinary incontinence."
The preoperative cine MRI shows SUI with mild hypermobile urethra (Figure 1). The second cine MRI was performed 3 months later after failed TVT procedure. It is assumed that TVT tape was positioned on or dislocated to proximal urethra (Figure 2). You can see changed urethral axis and opened proximal urethra.
"Midurethra" is critical, isn't it?

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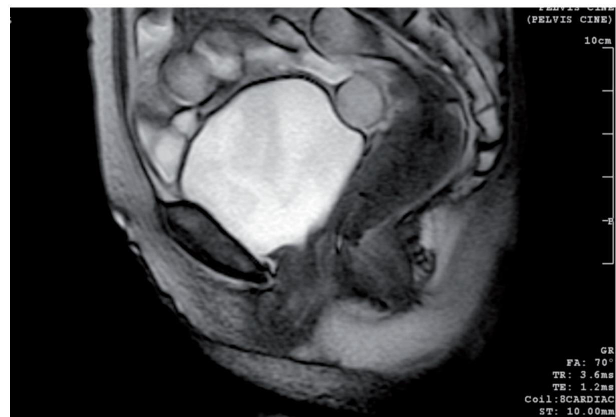

Figure 2 – Post-TVT.

International Society of Pelviperineology www.pelviperineology.com

2014 ISPP Conference

12th - 15th September, 2014 / Munich, Germany

SAVE THE DATE

Venue

12th-14th September
Literaturhaus München, Salvatorplatz 1

15th September
Anatomische Anstalt, Pettenkoferstr. 11

Preliminary program - Topics

- Anatomy of pelvic floor including workshop
- Diagnostics in pelvic floor dysfunction, ultrasound workshop
- Controversy about use of alloplastic materials at the pelvic floor
- Pathophysiology of vaginal prolapse, principles of surgical repair
- How to apply the Integral System for cure of difficult clinical problems
- New and old surgical techniques for pelvic floor reconstruction
- Site specific defect repair
- Cure of pelvic floor dysfunction by pelvic floor surgery: updated evidence
- Neuromodulation in pelvic floor dysfunctions
- Drugs including Botox to treat vesical and anorectal dysfunctions
- Current results of clinical studies using alloplastic materials at the pelvic floor
- Slings and artificial sphincter in male and female
- Anorectal function and dysfunctions, role of surgical techniques
- Aesthetic Gynecology
- Vaginal reconstruction

Organisation and registration

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Submission

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