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PROTRACTED URINARY RETENTION NECESSITATING URETHROLYSIS FOLLOWING TENSION-FREE VAGINAL TAPE SURGERY

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The fascial pubovaginal sling for stress urinary incontinence is effective and durable. Various techniques and materials have been developed, including polypropylene tension-free vaginal tape. Contrary to other synthetic slings, tension-free vaginal tape reportedly has a low complication rate.[1,2] We report on a case of long-term urinary retention after tension-free vaginal tape surgery, which required urethrolysis and partial sling excision.

CASE REPORT

A 52-year-old woman with stress incontinence confirmed on urodynamics, 60-degree urethral hypermobility and normal free uroflowmetry (maximum flow rate 30 ml. per second, residual volume 10 ml.) underwent tension-free vaginal tape surgery. The tension-free vaginal tape was placed with the patient under local anesthesia as originally described by Ulmsten et al in 1996. Throughout dissection bleeding was excessive with estimated blood loss of 200 ml. and operating time was 24 minutes. The patient voided before hospital discharge.

Normal voiding continued until postoperative day 4 when she was in urinary retention (1,300 ml.). Physical examination revealed extensive nontender suprapubic ecchymoses without discrete hematoma, and a resting and straining cotton swab angle of −5 and 0 degrees, respectively. The patient declined intermittent catheterization and a Foley catheter was placed. Ecchymoses completely resolved 2 weeks later with the cotton swab test demonstrating resting and straining angles of −30 degrees. A voiding trial was unsuccessful and the Foley catheter was reinserted (fig. 1).

At 3 weeks postoperatively intense urethral pain with any catheter movement developed. Cystoscopy showed severe erythema and edema at the posterior bladder neck. The deci-

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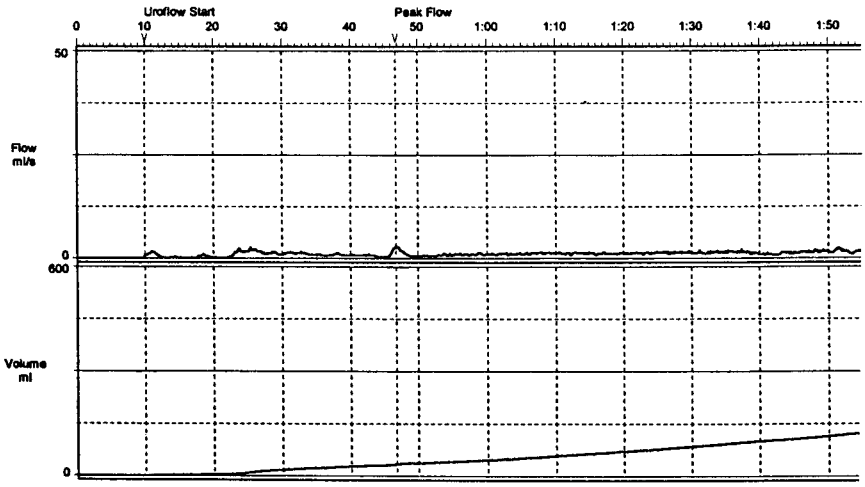
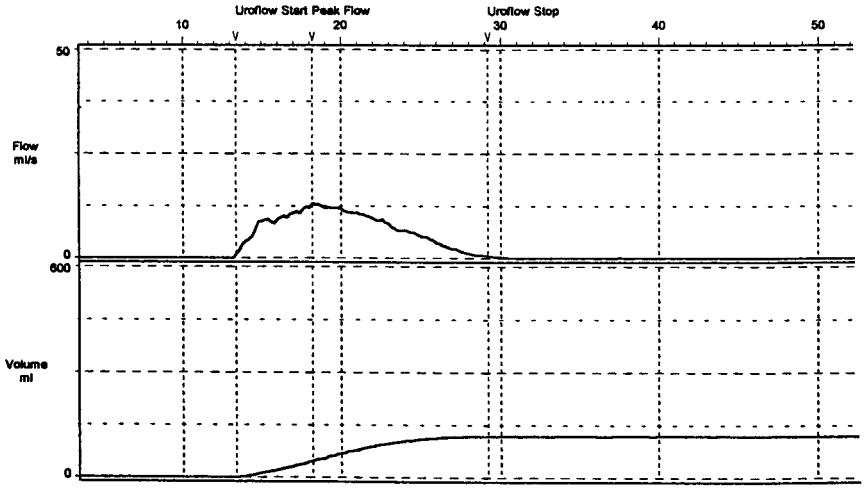


Uroflow Summary

			Dev (Female)
Maximum flow:	3.1	ml/s	-77 %
Average flow:	1.3	ml/s	-87 %
Voiding time:	1:57.6	sec	-685 %
Flow time:	1:44.0	sec	
Time to peak flow:	37.0	sec	-406 %
Voided volume:	135.5	ml	
Flow at 2 seconds:	0.7	ml/s	
Acceleration:	0.0	ml/s/s	
Residual Volume:	200	ml	

FIG. 1. Voiding trial 2 weeks after tension-free vaginal tape sling. Resting and straining cotton swab angle was −30 degrees. Indwelling Foley catheter was reinserted because patient declined clean intermittent catheterization.



Uroflow Summary

			Dev (Female)
Maximum flow:	13.2	ml/s	9 %
Average flow:	7.4	ml/s	1 %
Voiding time:	16.0	sec	-11 %
Flow time:	16.0	sec	
Time to peak flow:	5.0	sec	28 %
Voided volume:	118.7	ml	
Flow at 2 seconds:	9.4	ml/s	
Acceleration:	2.4	ml/s/s	
Residual Volume:	10	ml	

FIG. 2. Free uroflowmetry after urethrolysis and partial tension-free vaginal tape excision. Subjective report and objective assessment confirm normal voiding and no recurrence of incontinence after sling revision.

sion to correct urethral retraction surgically was made. We did not believe that there were any other less invasive techniques to accomplish this purpose and, especially in the presence of urethral inflammation, we did not believe that urethral dilation should be done.

At surgical exploration the polypropylene was embedded in dense scar and fragmented easily, which made complete removal impossible. The sling was partially removed by excision of 2 parasagittal 3 cm. segments. Bladder neck mobilization to resting cotton swab of +20 degrees required dissection extending above both pubic rami. Voiding was normal thereafter (fig. 2). The patient remains continent with negative diary, and pad and stress test 10 weeks after revision.

DISCUSSION

The tension-free vaginal tape is a recent modification of sling surgery with good short-term outcome results but scarce data concerning complications. Ulmsten et al reported a 3-year followup of tension-free vaginal tape in 131 women.[2] In 10% of the cases catheterization was required for 2 to 12 days postoperatively and all symptoms resolved without surgical intervention. Wang and Lo reported a 17% rate of immediate postoperative voiding difficulties in 70 women, which required an extra procedure using a Hegar dilator to "push the proximal urethra downward."[3] Larger series are not available. Our patient was in urinary retention after 3 weeks despite conservative measures. During this period increasing retraction of the sling was evidenced by the cotton swab angle changing from −5 to −30 degrees. Furthermore, there were edema and erythema at the vesical neck. Urethral erosion seemed imminent and prompt exploration with partial sling removal resulted in an excellent short-term outcome.

To our knowledge we report the first case of urethrolysis and removal of a tension-free vaginal tape sling. Dense scarring made complete removal impossible. Following urethrolysis, our patient resumed normal voiding and continence. However, removal of a synthetic sling may cause severe complications, such as urethrovaginal fistula and recurrent incontinence. We believe that the safety and long-term efficacy of the tension-free vaginal tape procedure remain to be determined and, as with all other incontinence procedures, advocate for judicious application by surgeons able to recognize and treat complications in a timely manner.

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