Clinical Pearls: UroCure ArcTV Sling Success in Management of Mixed Incontinence

Presented by:

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Patient Presentation

64-year-old G3 P3, NSVD x 3, presented with mixed incontinence with both stress urinary incontinence (SUI) and urgency urinary incontinence (UUI). Her symptoms began more than 5 years ago and have progressively worsened. She had tried a course of anticholinergics and B-3 agonists in the past with minimal improvement.

Exam revealed a Stage 1 rectocele and Stage 1 cystocele with urethral hypermobility. She leaked easily with Valsalva. Urodynamic studies confirmed detrusor instability and intrinsic sphincter deficiency with a urethral pressure profile of less than 10cmH2O. Post void residual was 30cc.

The patient underwent an ArcTV sling placement without complications. At her post op appointment, she reported complete resolution of both her SUI and UUI.

Discussion

It is common to see both stress urinary incontinence and urgency urinary incontinence resolve after a sling placement. The presumed mechanism is that urine leaking into the urethra from SUI triggers a neurologic UUI reflex response. By correcting the SUI a significant percentage of UUI will resolve. A case can be made for using a sling early in the algorithm for treating mixed incontinence.

Procedure

A foley catheter was placed and laid vertically on the pubis. Two vertical lines were drawn approximately 1cm lateral on each side of the foley just above the pubis. After injecting Marcaine for hydro-distention and post op pain relief, a 1cm sub-urethral incision was made vertically appx 1cm below the urethral orifice. Peri-urethral canals were developed bilaterally using Metzenbaum scissors. The ArcTV sling trocars were passed retropubically using a gently curving arc and pierced through the skin at the lines drawn above the pubis. Care was taken to come out suprapubically on the equivalent spot on each drawn line for cosmetic symmetry.

Cystoscopy was performed confirming no trocar injuries to the bladder or urethra. The sling was snapped to the base of the trocar then slowly pulled through the retro-pubic space and out the suprapubic punctures. Metzenbaum scissors were placed between the urethra and sling as a spacer. The ends of the plastic sling sheath were cut at the pre-marked area below the attachment to the trocar. Hemostats were placed on the transected plastic sheath and pulled out suprapubically. Using Alice clamps on each side of the sub urethral incision the mucosa was lifted proximally to reveal a 1cm gap between the sling and urethra. The Alice clamps were then brought down distally mimicking the effect of the sling tension when the patient would be sitting on the toilet. If the sling wasn't visible during this technique, it would indicate too much tension on the sling and the sling was then pulled down using the Metzenbaum scissors to the mucosal edge preventing over tightening of the sling.

The sub urethral mucosa was then repaired using 2-0 vicryl suture with a running horizontal mattress stitch. This technique creates a thicker sub urethral scar helping prevent sub urethral sling erosion.

Design Benefits of UroCure ArcTV

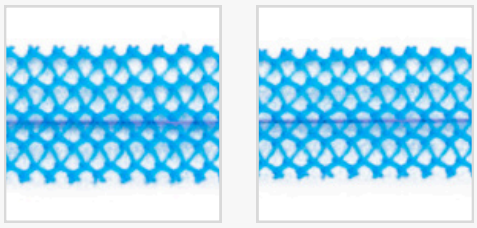


The "Clear-Click" rapid connector simplifies needle-sling connection and is consistent across all UroCure slings. The atraumatic tapered sheaths are designed to minimize tissue trauma and decrease the force required during the sheath-sling passage.

The ArcTV's stabilizing suture helps maintain the sling's shape and prevents deformations during placement, tensioning and sheath removal. The trocars are sturdy and less likely to wander off of the intended course vs other sling trocars. Having the shoulders tapered where the sling sheath attaches to the trocar decreases bleeding by limiting tearing of the peri-urethral veins during the pull through. The clear click connectors contribute to the overall ease of use of this sling making it an ideal sling to use for providers and for resident teaching. The cost savings to our surgery center were significant vs other slings.

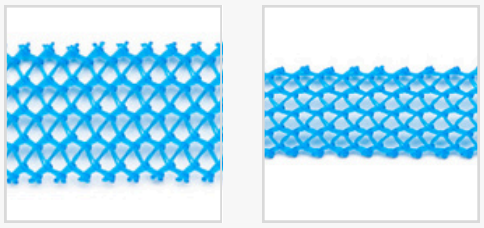
The photos below show how a 7N force-applied to the sling outside the knots-prevents pore collapse.

WITH STABILIZING SUTURE



0 Newton Force | 7 Newton Force

WITHOUT STABILIZING SUTURE



0 Newton Force | 7 Newton Force

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This case study was produced in cooperation with Dr. Bailey. Results from case studies are not predictive of results in other cases. Results in other cases may vary.

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