



## Transvaginal Excision of Intravesical Mesh Erosion

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### ABSTRACT

**Introduction and Objectives:** Transvaginal mesh has been used in the management of a multitude of female urologic conditions; most commonly vaginal prolapse and stress urinary incontinence. However, in the event of a complication related to the use of such mesh, there is scant literature on its safe and efficacious removal. We present a technique for transvaginal removal of vesicular mesh erosion.

**Methods:** The patient is placed in lithotomy position and cystoscopy is performed. Once bilateral ureteral catheters are in place, a Foley catheter is placed. Using a midline transvaginal approach, hydrodissection is performed. Allis clamps are used to grasp the vaginal epithelium, and vaginal flaps are developed. The sling is identified and the midline it is transected. A combination of sharp and blunt dissection is used to free the sling. The sling is dissected to the most lateral extent possible. Once the intravesical mesh is encountered, the entirety of the offending mesh is excised. Once the mesh has been removed, attention is then turned to the resultant cystotomy. The bladder is then closed in multiple layers. A urethral catheter is left indwelling postoperatively.

**Results:** The patient is discharged when ambulatory and tolerating a regular diet. A voiding cystourethrogram (VCUG) is obtained in 1 to 2 weeks and if urinary extravasation is not seen, the urethral catheter is removed.

**Conclusion:** Despite the use of mesh slings for stress urinary incontinence and pelvic organ prolapse, literature describing operative techniques to remove slings in the setting of urinary tract erosion is lacking. The described technique avoids significant manipulation of the urinary tract and further disruption of the periurethral and perivesical fascia while ensuring a watertight closure.

### INTRODUCTION AND OBJECTIVES

Transvaginal mesh has been used in the management of a multitude of female urologic conditions; most commonly vaginal prolapse and stress urinary incontinence. However, in the event of a complication related to the use of such mesh, there is scant literature on its safe and efficacious removal. We present a technique for transvaginal removal of vesicular mesh erosion.

### METHODS

The patient is placed in lithotomy position and cystoscopy is performed to identify the location of the mesh and to place ureteral catheters to aid in the identification of the ureters during the dissection of the offending mesh. Once bilateral ureteral catheters are in place, a Foley catheter is placed and gentle traction is placed on the catheter to aid in identification of the bladder neck by palpating the Foley balloon. Subsequently, using a midline transvaginal approach, hydrodissection is performed using injectable saline to infiltrate the length of

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the intended incision. Allis clamps are used to grasp the vaginal epithelium once incised, and vaginal flaps are developed in order to expose periurethral and perivesical fascia. Once the sling is identified in the midline it is transected, creating 2 arms. With traction on the edge of the transected sling, a combination of sharp and blunt dissection is used to free the sling from the medial to the lateral, working from known to unknown. The sling is dissected to the most lateral extent possible taking care to identify the location of the intravesical mesh. Once the intravesical mesh is encountered, the entirety of the offending mesh is excised, taking care to leave no eroded mesh in the bladder as a nidus for future infections or stones. Stay sutures can be placed upon encountering the intravesical portion of the mesh if there is concern the repair will be difficult to visualize. Once the mesh has been removed bilaterally at its most lateral aspect, attention is then turned to the resultant cystotomy. The bladder is then closed in multiple layers using delayed synthetic absorbable sutures, and stay sutures, if present, are removed. A urethral catheter is left indwelling postoperatively.

## RESULTS

The patient is discharged when ambulatory and tolerating a regular diet. A voiding cystourethrogram (VCUG) is obtained in 1 to 2 weeks and if urinary extravasation is not seen, the urethral catheter is removed.

## CONCLUSIONS

Despite the use of mesh slings for stress urinary incontinence and pelvic organ prolapse, literature describing operative techniques to remove slings in the setting of urinary tract erosion is lacking. The described technique avoids significant manipulation of the urinary tract and further disruption of the periurethral and perivesical fascia while ensuring a watertight closure.