

Mesh Infection of a Male Sling

A 52-year-old man presented with purulent drainage from the scrotum and medial superior left thigh approximately 5 months after a second surgical procedure to remove fragments of an AdVance™ male sling from the left thigh. Medical history began 6 years earlier when he underwent robot-assisted laparoscopic prostatectomy for high grade prostate cancer. One year postoperatively he was treated with adjuvant intensity modulated radiation and hormonal therapy for biochemical recurrence.

Two years later he underwent the first AdVance sling placement for sphincteric incontinence refractory to conservative measures, and the next year he underwent a second AdVance sling placement for recurrent incontinence. Shortly after the second AdVance sling placement, the patient reported perineal pain as well as purulent drainage from the left thigh. Excision of purulent peri-urethral segments of 2 AdVance male slings and part of the segment of the sling in the left thigh were excised. A second surgery was performed to remove a fragment of the sling in the left thigh because of recurrent drainage.

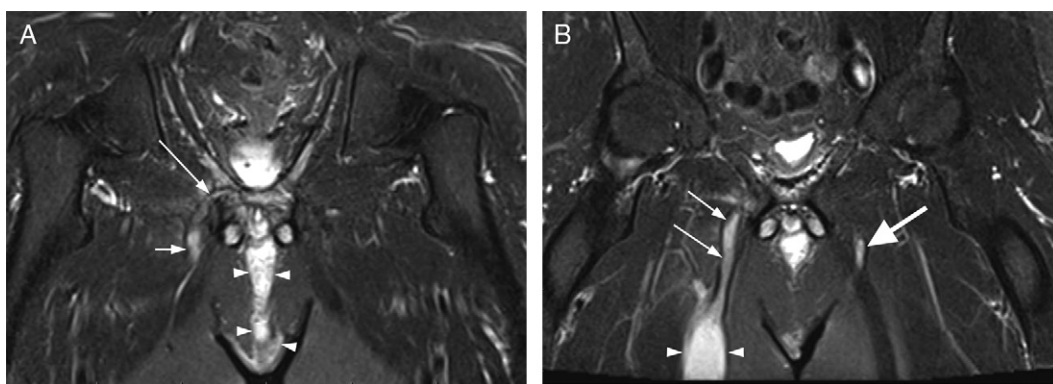
Cystoscopy showed no erosion of the sling into the urinary tract. Magnetic resonance imaging (MRI), the best study to identify sinus tracts, fistulas and abscesses in the perineum or proximal thigh, revealed a 3 cm abscess in the gracilis muscle of the

right thigh tracking from the bladder base, through the obturator hiatus and inferiorly along the gracilis muscle (part A of figure). A second abscess in the superior medial right thigh was completely asymptomatic.

The persistent sinus tract from the left obturator fossa to the left thigh (part B of figure) was thought to be secondary to a small remnant of the polypropylene mesh. However, the presence of mesh is difficult to delineate on MRI and when visualized it is typically seen as a signal void (dark signal). Infected mesh is easier to detect due to the associated inflammatory changes on T2-weighted or post-contrast T1-weighted images. There was also a separate sinus tract in the left groin (part B of figure).

Sling infections have been reported with many types of mesh slings in men and women but, to our knowledge, infection of an AdVance sling has not been reported in the literature.¹⁻³ In a study of salvage surgeries after mesh slings complications occurred an average duration of 2 years after sling placement.⁴ A review article of 107 reports describing all types of male slings for post-prostatectomy incontinence cited a 2% to 12% mesh infection rate during a 1 to 4-year followup.⁵

Irradiated patients generally have higher infection and complication rates after mesh operations



Coronal MRI of pelvis. A, sinus tract extending along right internal obturator muscle (long arrow) inferiorly along surface of gracilis muscle (short arrow) and fluid collection in scrotum (arrowheads). B, inferior end of sinus tract (arrows) terminates in large fluid collection (arrowheads) in medial right thigh (gracilis muscle). Note second sinus tract in left groin (fat arrow).

than nonirradiated patients. In a recent study of 27 incontinent men treated with an AdVance sling after intensity modulated radiation therapy for prostate cancer complication rates were low and no mesh erosions or infections had occurred at a mean followup of 16 months.⁶ In a study of 230 men who had an AdVance sling placed for stress incontinence of any origin followed for 4 to 42 months (median 17 months) a superficial wound infection and a urinary tract infection occurred postoperatively but no sling infection.⁷

Treatment of an infected mesh sling is to excise as much of the mesh as possible. Ideally, all of the mesh should be removed because retained fragments serve as a nidus for recurrent infection. Typically, infected mesh does not adhere to tissue and will slide out easily during surgery. Excision of a transobturator sling for refractory thigh pain in a woman has been described.⁸ For sections of the sling that are not actively infected however, excision of the mesh slings can be problematic because of scarring as well as the difficulty locating the mesh, particularly portions near the obturator fossa.

This patient subsequently underwent débridement and exploration of the scrotal and right thigh abscesses. A small incision was made in the right superior, medial thigh and purulent material was evacuated. There were no mesh fragments found at

either site and it was decided not to enlarge the incisions to explore further.

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