Case report

Ventral herniation of urinary bladder as a sliding component through trocar suprapubic cystostomy scar - a case report

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Abstract

Suprapubic catheterization is common urological procedure. Rare complication (less than 10 cases reported) is herniation through trocar insertion site. In this case, 65 years Muslim male with history of urethral stricture presented with a reducible hernia in lower abdomen since 6 months following a trocar assisted suprapubic cystostomy done 1 year back. Lay open of pan-anterior urethra was done followed by 1 month later, prolene mesh hernioplasty.

Keywords: suprapubic cystostomy; incisional hernia; urethral stricture

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Introduction

Suprapubic catheterization is common urological procedure done for acute or chronic retention of urine when retrograde catheterization cannot be performed. It can be done either by open method of incising the layers of abdomen and then opening the bladder followed by catheter insertion or suprapubic cystostomy (SPC) with the help of a trocar (of diameter 5.5 mm to allow a 16 Fr Foley's catheter) under ultrasonographic guidance.

Complications are generally rare and include hematuria, catheter blockage, urinary tract infection, etc. Sometimes serious complications may occur that include bowel perforation, intestinal obstruction and vascular injury. Incisional hernia through the trocar insertion site is a very rare complication.

This is a case report on ventral herniation of urinary bladder as a sliding component through suprapubic cystostomy trocar incision site.

Case report

A 65 years old Muslim male presented in the outpatient department with a swelling of size of an orange with dragging type pain in lower abdomen since last 6 months.He has history of decreased flow of urine since 5-6 years with acute retention of urine 3 years back for which urethral dilatation was done under urethroscopic guidance with soft silastic dilators and a Foley's catheter was inserted which was removed after 6 weeks following successful voiding trial.He was voiding well but the symptoms gradually began to aggravate and 1 year back he again had acute retention and a trocar assisted SPC was performed under ultrasonography guidance in another hospital. Since then, he is passing urine through the suprapubic catheter. 6 months back, he noticed a gradually increasing swelling in SPC site with dragging type pain which increases in size on coughing and straining.

On examination of the abdomen, there was a reducible hernia of size 10 cm arising from suprapubic cystostomy site containing enterocele. The gap in the shealth could be felt which allowed two fingers to be introduced. The SPC was in situ. Abdomen was soft, with no signs of bowel obstruction. External urethral meatus is very narrow with lichen sclerosus changes and the anterior urethra is cord like in feel

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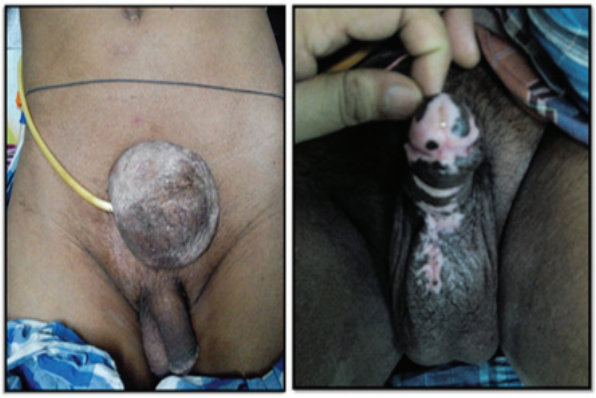

Fig.1: Hernia through SPC site with severe Lichen Sclerosus changes

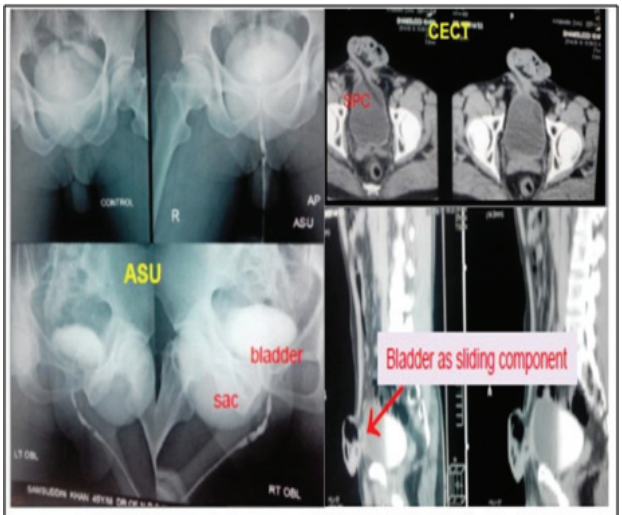

Fig. 2: ASU and CECT scan photos showing bladder as a component of sac

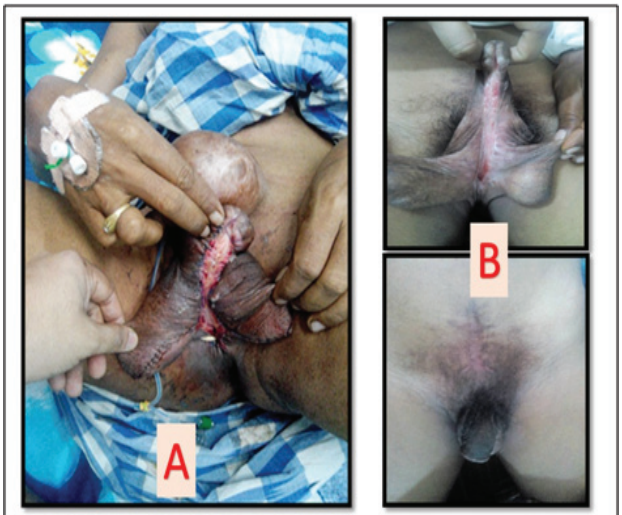

Fig. 3: A. Lay open done; B: Following 6 months of hernioplasty

(Fig 1). Ascending urethrogram showed pan-anterior urethral stricture and Micturating cystourethrogram suggested presence of bladder within the sac (Fig 2). Contrast enhanced CT scan showed ventral henial sac containing omentum and gut and a small part of bladder as a sliding component which was not present in all films.

It wasdebated whether hernia or urethral stricture had to be dealt first. As the hernia was reducible, clearance of distal obstruction was done first. A Johansen lay open of pan-anterior urethrawas done (Fig 3A). It was followed by 1 month later, an onlay prolene mesh hernioplasty. Patient attended the OPD after 6 months. Excellent healing of native urethra was noted with wide open perineal urethrostomy. There is no recurrence of hernia (Fig 3B). Patient is now so much satisfied with his flow that he do not want a second stage closure. He is now put on regular self catheterisation of perineal urethrostomy.

Discussion

Suprapubic trocar cystostomy is done in cases where retrograde per urethral catheterization is not possible, especially in urethral stricture or injury. It may also be done in cases with neurogenic bladder as a form of bladder management as suprapubic diversion has some benefits like decreased bacteriuria, better comfort with higher patient acceptability,[1] decreased chance of urethral stricture formation and penile pressure necrosis, scrotal abscesses, epididymitis, etc.[2] SPC is very easy to perform in cases of distended bladder by extraperitoneal midline suprapubic puncture but may create some problems if bladder is not fully distended or in patients with severe adhesions due to previous pelvic surgery or radiotherapy.[3] Complications following SPC are not so uncommon and include urinary tract infection, hematuria, catheter blockage, etc.[4] Major complications are generally uncommon and include intestinal perforation, vascular injury, entero-cutaneous fistula, bladder perforation, stone formation around catheter tip, catheter fracture with intravesical loss of fragment, catheter knotting, catheter migration into ureter, and an increased risk of bladder cancer.[5]

Incisional hernia is very rare following suprapubic trocar cystostomy as the gap created by the trocar is very small, nearly 5.5mm in diameter and is generally not seen with SPC in situ. Less than 10 cases have been reported till date in the literature. It occurs when the trocar is passing through the peritoneum without injuring the bowel loops and later on, intestine or omentum protruding out through the gap in shealth or linea alba created by the trocar. It is prone for strangulation as neck is generally very small. Harilingam et al reported a case of strangulated hernia following trocar SPC done 2 years back in a 65 years male with urethral stricture following transurethral resection of prostate done 4 years back.[6] Lobel published 2 case reports

of incisional hernia formation following SPC, one having a Burch urethropexy and second following vesicovaginal fistula repair.[7] Mehta et al, Rao et al and Mohammad hosseini, each published a single case experience.[8-11]

We are presenting a case with panurethral stricture with dense lichen sclerosus changes in a 65 years old man who had undergone a SPC insertion 1 year back and presented in the OPD with a suprapubic hernia. The surprising part is that hernia has developed while the SPC is in situ but it should be understood as the content of the hernia was mainly gut and omentum and bladder was protruding only as a sliding component.

Conclusion

Urosurgeons should be suspicious enough to diagnose a case of incisional hernia following suprapubic cystostomyas these are extremely uncommon. Preventive measures include a low insertion of trocar rather a high incision to void the distended bladder as this will not perforate the peritoneum.These hernias are prone to get strangulated and so repair must be done as soon as possible so that life threatening complications do not occur.

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