A rare cause of small bowel obstruction

Introduction

Suprapubic catheter insertion is uncommonly associated with complications. This article reports an 83-year-old man admitted with small bowel obstruction, 4 years after insertion of a suprapubic catheter.

Discussion

Insertion of a suprapubic catheter can be associated with complications including bleeding, recurrent urinary tract infections, catheter blockage, incisional hernia after long-term removal of the catheter (Mehta et al, 1999) and small or large bowel injury after transperitoneal insertion of the catheter. A suprapubic catheter can be inserted transperitoneally rather than extraperitoneally because of either an inadequately distended bladder, a relatively non-distensible bladder or a deep peritoneovesical fold (Simpson, 2001).

Small bowel obstruction can also occur after transperitoneal insertion of a suprapubic catheter. The catheter can act like a band (Goldblum and Brugger, 1999; Simpson, 2001), pass through the mesentery and form an adhesive band between the mesentery and the abdominal wall (Lin et al, 2005) or go through the mesentery so close to the bowel that it acts like a sling, kinking and obstructing the bowel.

In this case obstruction occurred partly because of formation of an ischaemic stricture secondary to damage to the mesentery.

Conclusions

To the authors' knowledge this mechanism of small bowel obstruction caused by a suprapubic catheter is the first case documented in the English literature. The risk of small bowel obstruction by a suprapubic catheter is minimal, but must be considered in a patient presenting with small bowel obstruction after such a procedure even if it took place several years before. BJHM

Goldblum D, Brugger JJ (1999) Bowel obstruction caused by dislocation of a suprapubic catheter. *Surg Endosc* **13**: 283–4

Lin ACM, Wu CC, Wang TL, Chang H (2005) An unusual cause of volvulus: the misplaced suprapubic catheter. *J Emerg Med* **28**(2): 219–20

Mehta A, Makris A, Saad A, Callaghan PA (1999) Incisional hernia after suprapubic catheter insertion. *BJU Int* **84**: 526–7

Simpson R (2001) An unusual cause of small bowel obstruction: the misplaced suprapubic catheter. *J Urol* **165**: 1998

Figure 1. Plain abdominal film showing small bowel dilatation.

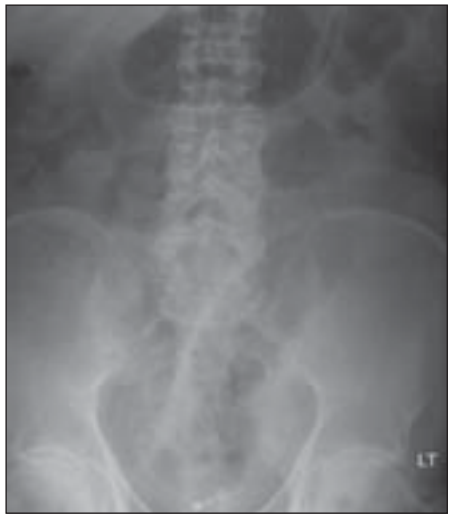


Figure 2. Computed tomography scan of the abdomen showing small bowel dilatation proximal to the suprapubic catheter.

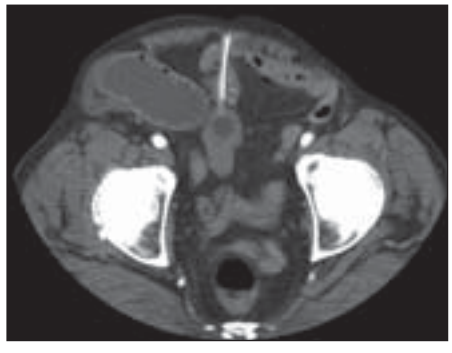
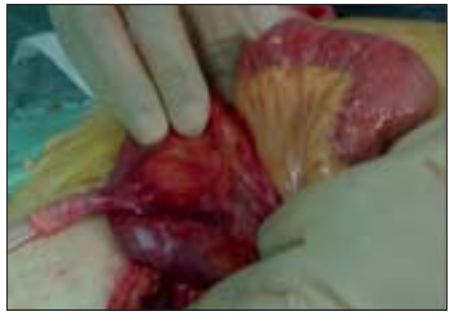


Figure 3. The suprapubic catheter is seen going through the mesentery of the small bowel very close to the bowel and acting as a sling.



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Case Report

An 83-year-old man was admitted with a 1-day history of worsening, colicky central abdominal pain associated with vomiting and abdominal distension. A suprapubic catheter had been inserted under cystoscopic vision 4 years previously for a hypotonic, trabeculated bladder complicating long-term bladder outlet obstruction as a result of benign prostatic hyperplasia. The catheter was changed every 8 weeks without the need for any further surgical intervention.

On this admission, physical examination revealed a grossly distended abdomen with central and left upper quadrant tenderness. He also had a left inguinal hernia, which was easily reducible. The suprapubic catheter was placed two fingerwidths above the upper border of the pubic bone.

A chest radiograph was normal while a plain abdominal film showed dilated small bowel (*Figure 1*). A computed tomography scan of the abdomen showed the suprapubic catheter passing through the mesentery of the small bowel with dilated small bowel loops proximal to it (*Figure 2*). An urgent lower midline laparotomy was performed. The suprapubic catheter passed transperitoneally through the mesentery of the distal jejunum, very close to the bowel, before entering the bladder. The suprapubic catheter acted as a sling, kinking the jejunal loop, which looked discoloured (*Figure 3*). The suprapubic catheter tract within the mesentery and the short segment of ischaemic jejunum were resected and anastomosis performed. Another suprapubic catheter was inserted extraperitoneally inferior to the laparotomy wound. The postoperative period was uneventful apart from a wound infection, which was treated with antibiotics.

Histological examination of the resected specimen showed a strictured inflamed segment of jejunum about 20 mm wide. Sections from this area showed an actively inflamed granulation tissue-lined tract within the subserosa and muscularis propria, consistent with the tract formed by the suprapubic catheter.