Learning from errors

An adverse event of suprapubic catheter SPC insertion. A call for updating the existing guidelines

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Summary

The suprapubic catheter (SPC) is a useful and widely used tool in urological practice. However, complications can arise from its insertion or ongoing care. We add to the literature a case of an adverse event of its insertion where it has gone through a vascular graft and recommending updating the SPC insertion guidelines.

BACKGROUND

The suprapubic catheter (SPC) is a useful and widely used tool in urological practice. However, complications can arise from its insertion or ongoing care. Multiple common complications associated with SPC of infection, bleeding and obstruction are reported.¹⁻² Bowel injury is one of the most serious complications of SPC insertion with high mortality.¹⁻³⁻⁵

It was only in 2010 when the British Association of Urological Surgeons (BAUS) published national guidelines on SPC insertion⁶ after the national patient safety Agency NPSA issued a Rapid Response Report (RRR) on minimising risks of SPC insertion in 2009.⁷ These guidelines provide a comprehensive guide for performing this procedure and emphasis has been made when there is a surgical history of abdominal operations. We report a rare adverse event of SPC insertions that has gone through a Femor-o-Femoral bypass graft.

Femor-o-Femoral crossover is an operation to bypass the blockage in the Ilio-femoral artery from right to left or vice versa through a subcutaneously tunnelled bypassed graft.

CASE PRESENTATION

We report a case of a patient who had an SPC inserted accidentally into the Femor-o-Femoral crossover bypass graft.

After a decision for a long-term SPC was made, the patient was referred for a long-term SPC insertion which was performed with the aid of cystoscopy. The patient was admitted to the hospital few weeks later for lower abdominal pain and urosepsis. Patient's medical history included a second Femor-o-Femoral crossover bypass graft after the first graft was blocked.

INVESTIGATIONS

Preliminary investigation showed bacterial urine infection. A CT showed the graft with signs of infection (figure 1) and the SPC has gone through the blocked Femor-o-Femoral crossover bypass graft (figures 2 and 3). This led to the development of infection in the 'non-functioning' bypass graft.

Figure 1 A CT scan shows the Femor-o-Femoral crossover graft that contains air bubble.

TREATMENT

Patient was started on intravenous antibiotics and the infected graft was removed surgically which necessitated further wound debridement.

OUTCOME AND FOLLOW-UP

Patient was discharged after spending 54 days in hospital.

Figure 2 CT scan showing the suprapubic catheter goes through the Femor-o-Femoral crossover graft with surrounding soft tissue inflammation.

Figure 3 CT scan showing the suprapubic catheter goes through the Femor-o-Femoral crossover graft with surrounding soft tissue inflammation (alternate view).

DISCUSSION

The insertion of SPC is a widely used procedure in urological practice. It is considered to be a safe procedure generally; however, complications can arise from its insertion or postinsertion care. The most reported common and serious complication of SPC insertion is bowel perforation and this risk is estimated as 0.15%.⁷ However variable reports documented up to 2.7% risk of bowel injury.¹⁻⁵ Obviously, there is a substantial increase of bowel injury due to adhesions if there has been previous abdominal operations.⁸

The recent published BAUS national guidelines on SPC insertion do not explain in detail about the precautions pre SPC insertion. It explains about previous lower abdominal and pelvic operations in relation to adhesion and risk of bowel perforation; however, there is no mention of previous vascular procedures especially Femor-o-Femoral crossover bypass graft in which a tunnelled subcutaneous bypass graft is the most common technique to perform this bypass where the graft crosses from side to side superficial to the bladder. In majority of cases this procedure is performed with two incisions over both right and left common femoral arteries, hence no abdominal scars as a result of this vascular operation.

We recommend updating the SPC insertion guidelines.

Learning points

- ▶ Suprapubic catheter (SPC) insertion is a useful procedure but precautions must be applied during its insertion.
- ▶ Emphasis should be made when taking history about any surgical procedures the patient had before insertion of the SPC catheter.
- ▶ Thorough clinical examination is a must to correlate the history looking for any scars of previous surgical procedures.
- ▶ Cystoscopy control for SPC insertion can only control ending the catheter in the bladder but cannot visualise the tract that it is going through.

Competing interests None

Patient consent Obtained

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Please cite this article as follows (you will need to access the article online to obtain the date of publication).

Jalil R, Mukundan C, Bhatti TS. An adverse event of suprapubic catheter SPC insertion. A call for updating the existing guidelines. *BMJ Case Reports* 2012;10.1136/bcr-2012-007424, Published XXX

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