Case Report

Inadvertent suprapubic gastrostomy: Report of a unique complication of blind percutaneous suprapubic trocar cystostomy

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ABSTRACT

Emergency percutaneous trocar suprapubic cystostomy is a common surgical procedure for acute urinary retention. Although uncommon it can be associated with a few complications. The most dangerous complication is iatrogenic bowel injury. Literature shows reported cases of small and large bowel injuries. We report a case of inadvertent placement of suprapubic catheter into a dilated and ptotic stomach. This is the first reported case of this complication of suprapubic cystostomy.

Key words: Inadvertent bowel injury, iatrogenic bowel injury, suprapubic cystostomy

CASE REPORT

A 56-year-old male patient presented to our emergency department with chief complains of inability to void urine for 24 hours and vague abdominal pain. He was diagnosed as a case of acute urinary retention and was referred to the surgical team for further management. The surgical junior resident briefly examined him and attempted catheterization. After failing twice he decided to go for percutaneous suprapubic trocar catheterization. A residual volume of 2 L of coffee ground colored urine was noted on catheterization which was recorded as hematuria. Later, he was reviewed next morning when the catheter bag was found empty without any drainage for 10 hours. On further questioning he denied any history of any symptoms of bladder outlet obstruction or urinary tract infection. He never had catheterization or urethral instrumentation before and denied any history suggestive of urethritis. A per urethral catheter was inserted subsequently which went smoothly. After that he had liquid oral feed which came out through the catheter straightway. So a misplacement of the catheter was diagnosed. The suprapubic cystostomy site was found to be correct. A retrospective history suggested features of gastric outlet obstruction. He also had a previous history of upper gastrointestinal bleeding. He was anuric. We performed a laparotomy after resuscitation. On laparotomy the stomach was found to be dilated with the catheter tip along with the balloon in it [Figure 1]. It was a case of benign gastric outlet obstruction with a hugely distended ptotic stomach. There were also features of portal hypertension. The laparotomy was abbreviated because the patient was quite unstable intraoperatively. Feeding jejunostomy was

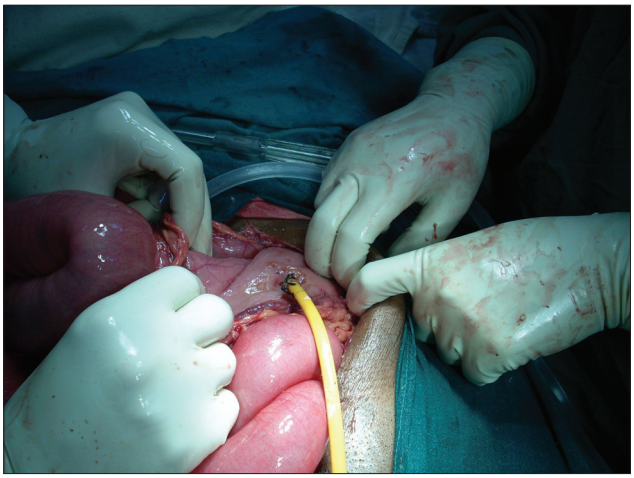

Figure 1: Intraoperative photograph of the catheter in the stomach

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done. A plan was made to investigate the patient further. But on the fourth postoperative day the patient had a massive upper gastrointestinal bleed from which he died in spite of all attempts for resuscitation.

DISCUSSION

Emergency suprapubic catheterization is a rewarding treatment for acute urinary retention due to urethral stricture, urethral trauma and complex prostatic disease.[1] In most of the hospitals because of non availability of emergency urologist is not it is done by the relatively less experienced surgical trainees. The complications of this procedure are infection, inadvertent ureteral catheterization, extravasation of urine to intra or extraperitoneal space, clot obstruction of the catheter, extrusion of the catheter, hematuria, and bowel perforation.[1] Two cases have been reported in the literature where a delayed injury to ileum occurred while changing the catheter after a few months (2 months and 8 months) of suprapubic cystostomy.[2,3] A case has also been reported in the literature where occult transfixation of the sigmoid colon by a suprapubic catheter occurred.[4] The midline laparotomy is associated with anterior abdominal wall adhesion in 59% of cases.[5] So blind suprapubic trocar cystostomy should be avoided in patients with previous history of midline laparotomy or lower abdominal operations. A small Korean study by Kim *et al.* showed that a preliminary ultrasound examination before suprapubic troar catheterization avoided bowel injury in comparison to 3.3% incidence of bowel injury without it.[6]

Meticulous history taking and thorough and meticulous clinical examination are extremely important to reduce the risks associated with this procedure.[7] The surgeon should carefully palpate the bladder and wait for adequate bladder distension. Putting the patient in Trendelenburg position also shifts the intraabdominal organs away from the puncture site and thus helps avoiding bowel injury.[7] The availability of bladder scanners confirms the diagnosis and measure the bladder volume and thus making reduces the possibility of various complications.

In our case we found that inadequate patient assessment, lack of experience of the junior surgical trainee, absent senior surgical input, nonavailability emergency urologist, and nonavailability of bladder scanner were the possible causes of this preventable complication.

CONCLUSION

This is the first reported case of this complication of percutaneous suprapubic trocar cystostomy. It has clearly demonstrated the importance of careful and meticulous history taking and physical examination. A good history and clinical examination could possibly have avoided this complication in our case. It also reminds us the importance of taking all the necessary precautions to minimize the complications of blind suprapubic trocar cystostomy. Whenever possible a quick bladder scan should be done before suprapubic cystostomy. This report will make a surgeon aware about the possibility of this unique but unlikely complication.

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