



Case Report

Erroneous diagnosis of left ureteric injury leading to insertion of double J catheter to the left spermatic vein

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Abstract

A case of erroneous diagnosis of left ureteric injury and its results is reported. An 86-year-old man was operated on for perforated diverticulitis. A tubular structure was injured at the left paracolic gutter and repaired over double J catheter. Six months later the proximal side of the catheter was found in the right ventricle, because it has been introduced into the spermatic vein and not into the left ureter.

Keywords: Ureteric injury; Erroneous diagnosis; Double J catheter; Left spermatic vein

1. Introduction

The most frequent extraintestinal complications after operation on the colon and rectum are urologic. Injury to the ureters is probably the most serious of these. The reported incidence of operative ureteral injury in surgery on the rectum and distal left colon varies between 1 and 10% [1–3].

It is known that surgery for complicated diverticulitis may result in ureteral injury and for this reason preoperative ureteral catheter placement is used [3,4].

In the presented case, erroneous diagnosis of left ureteral injury lead to catheterization of the venous system.

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2. Case report

An 86-year-old male was admitted because of acute abdominal pain. A few hours after his admission, he was operated upon. An inflammatory perforated sigmoid mass compatible with diverticulitis was found. In an attempt at resection of the inflamed sigmoid segment, mobilization of the bowel was initiated. During this procedure, a tubular structure was transected at the left paracolic gutter. Because the surgeon's impression was that the left ureter was injured, an urologist was called and he anastomosed it end to end over a double J catheter. Due to this unexpected complication, the attempt at sigmoid resection was stopped. A transverse loop colostomy and drainage of the left paracolic gutter were performed.

The postoperative course was accompanied by respiratory failure which was managed in the intensive respiratory care unit. Two weeks postoperatively the patient was discharged.

Six months later, the patient reappeared consulting us concerning closure of the colostomy. On preoperative chest X-ray a Radiopaque catheter was demonstrated inside the right ventricle. On plain abdominal film the intracardial

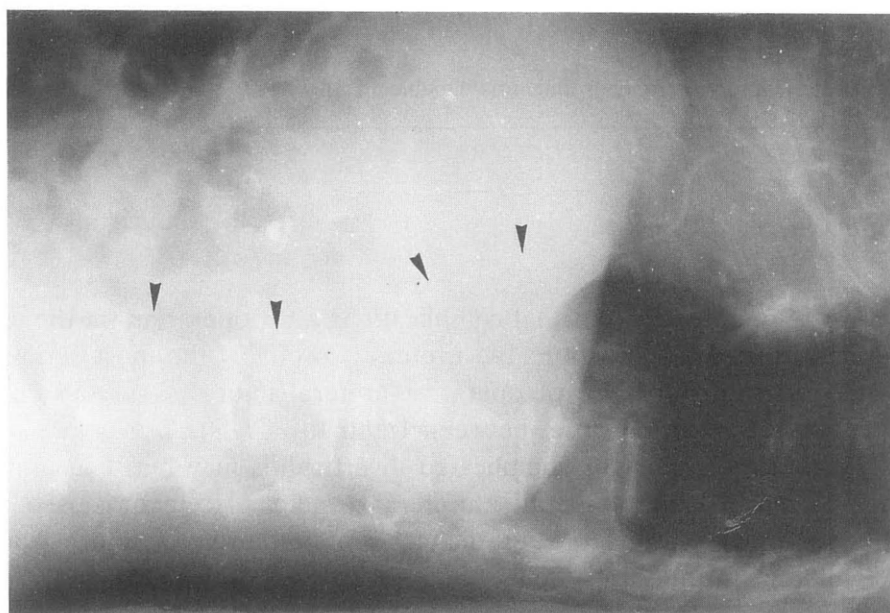


Fig. 1. Lateral abdominal and chest film demonstrating the course of the catheter from the level of L5 to the right ventricle (catheter course in the abdominal cavity is arrowed).

catheter was found to extend from the abdominal cavity (Fig. 1). This course of the catheter was confirmed also by echocardiography and ultrasonography. The patient was operated upon. The distal part of the double J catheter was found in the left spermatic vein. Under radiologic guidance, the catheter was removed without difficulty. A subtotal colectomy and ileorectal anastomosis were performed because of severe diverticular disease of the entire colon. The postoperative course was uneventful.

3. Discussion

In the described case, the double J catheter was introduced into the left spermatic vein. The catheter was subsequently translocated toward the right ventricle because in reevaluation of the postoperative chest X-rays performed during the patient's stay in the Intensive Respiratory Care Unit the catheter was not demonstrated.

The occurrence of the described case was possible because of accumulation of a number of conditions:

- (1) The left ureter was not properly identified.
- (2) Transection of the vein did not result in profuse bleeding as expected. Proximal occlusion of the spermatic vein and a competent valve between the renal and the spermatic vein can explain this fact.
- (3) The wall of the spermatic vein was thickened due most probably to fibrotic changes.
- (4) The insertion of the double J catheter was not followed by performance of plain abdominal film and/or cystoscopy to evaluate its proper localization. Utilization of those examinations might have been essential for detection of the described error. The double J catheter is composed of silicon. For this reason no adhesions were formed between the catheter and the endocardium. Due to this fact, the transabdominal approach for removal of the catheter was feasible. This approach seems to us to be the most appropriate. It must be performed under fluoroscopic guidance with assistance of an experienced cardiologist. If pulling of the catheter is accompanied by resistance because of adherence of the catheter to the endocardium, thoracotomy is indicated.

In conclusion, we have described a very rare iatrogenic complication. This complication would have been preventable by proper anatomical identification and by localization of the catheter after its placement. The transabdominal approach was proved to be the preferred approach for treatment of this complication.

References

- [1] Kramhoft J, Kronbeor O, Backer OG, Sprechler M. Urologic complications after operation for anorectal cancer with an evolution of preoperative intravenous pyelography. *Dis Colon Rectum* 1975;18:118–122.
- [2] Tank ES, Ernst CB, Woolson ST, Lapidus J. Urinary tract complications of anorectal surgery. *Am J Surg* 1972;123:118–122.
- [3] Leff EI, Groff W, Rubin RJ, Eisenstat TE, Solvati EP. Use of ureteral catheters in colonic and rectal surgery. *Dis Colon Rectum* 1982;25:457–460.
- [4] Kyzer S, Gordon PH. The prophylactic use of ureteral catheters during colorectal operations. *Am Surg* 1994;60:212–216.