Case Report

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CECUM PERFORATION IN PERCUTANEOUS RENAL SURGERY

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ABSTRACT

Introduction: We report a case of cecum lesion during percutaneous nephrolithotripsy not diagnosed during surgery.

Case Report: A 48-year-old woman was submitted to a right percutaneous nephrolithotomy due to a 2-cm renal pelvis calculus. The puncture was performed in the right lumbar region, 0.5 cm medial to the posterior axillary line and around 2 cm below the 12th rib extremity. In the 2nd post-operative day, fecaloid liquid and gas elimination was present around the nephrostomy opening. An exploratory laparotomy showed feces in the peritoneal cavity and the nephrostomy catheter that transfixed the cecum. The nephrostomy was removed, the cecum openings were revived and sutured in two plans. The nephrostomy was replaced with right flank exteriorization. The peritoneal cavity was washed, and early maturation loop ileostomy was performed.

Comments: The case reported here presents the particularity of having the whole percutaneous procedure performed through the cecum, despite not identified intraoperatively. Taking into consideration that the puncture was not foreseen, and that there were two cecum openings, it is inferred that the cecum could be abnormally distended and dislocated upwards and backwards, conditions which would justify the complication.

Key words: kidney; nephrolithotomy; percutaneous; complications; cecum perforation
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INTRODUCTION

Percutaneous nephrolithotomy was described over 30 years ago, and since the eighties it has been considered an effective procedure for urinary lithiasis treatment in the urological practice. Because a small cutaneous incision of approximately 2-cm is used, it presents a good post-operative recovery and fast return to normal activities. A case of involuntary transcecum approach, not diagnosed during the surgery, is reported. Any report of cecum perforation in this type of surgery was found in the literature.

CASE REPORT

A 48-year-old woman was submitted to a right percutaneous nephrolithotomy due to a 2-cm renal pelvis calculus which did not fragmented after two attempts of extracorporeal shock wave lithotripsy (ESWL) (Figure-1). The puncture was performed in the right lumbar region, 0.5 cm medial to the posterior axillary line and around 2-cm below the 12th rib extremity. A pneumatic lithotriptor was used and there were no abnormalities during the procedure (Figure-2). Postoperatively, the patient presented flank and right lumbar region pain. In the second postoperative day (PO) she presented fecaloid liquid and gas elimination around the nephrostomy opening. In the third PO day, the patient was submitted to median laparothomy under the suspicion of acute abdomen intestinal perforation, due to severe right flank pain, painful abdominal decompression, general state fall and fecaloid liquid elimination around the nephrostomy. During the procedure, feces in the peri-

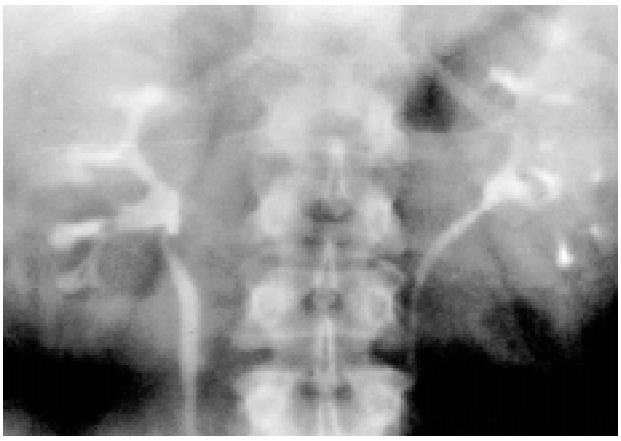

Figure 1 - *Excretory urography showing right renal pelvis filling defect due to a 2-cm calculus.*

toneal cavity and the nephrostomy catheter which transfixed the cecum were identified. The nephrostomy was removed, the cecum openings were revived and sutured in two plans. The nephrostomy was replaced with right flank exteriorization. The peritoneal cavity was exhaustively washed with saline. Early maturation loop ileostomy was performed. The peritoneal cavity was drained with a rubber drain. The nephrostomy was removed in the 7th PO day. The patient improved slowly and was discharged from hospital in the 22nd PO day. Ileostomy closing was scheduled after 3 months.

COMMENTS

Among the percutaneous renal surgery complications, there are the immediate, such as hemorrhage, hematuria, pneumohydrothorax, pathway loss, gastrointestinal and gallbladder perforation, ureteropyelic junction rupture, impaction of the calculus extractive probe in the ureter, guiding string rupture, iodine contrast allergic reactions, bacterial infection and hydro-electrolitic metabolic dysfunction. Among the latest, there are urinary infections, residual lithiase and ureteropyelic junction obstruction (1).

The percutaneous renal access is a relatively safe procedure, with complication rates varying from 5 to 8%. Adjacent organs lesions are not common; however, isolated cases of gastrointestinal lesions have been reported. The majority of these accidents involves the colon and, more rarely, the duodenum and gallbladder, which can lead to peritonitis and fistulas (1).

In some cases, the colon can be in a posterior position in the retrorenal space, which favors this kind of accident. The incidence of colon lesions in percutaneous renal procedures is low, of around 0.6% (2). In slim patients, there are more chances of the colon be located posteriorly, because they have less retroperitoneal fat. The abdomen computed tomography is the best procedure to evaluate this suspicion, although its use in the preoperative of all patients to be submitted to percutaneous renal surgeries is not feasible (2).

When the diagnosis is made during the surgery by organ contrasting, a conservative approach may be adopted if a small and punctiform lesion is evident. In these cases, fasting, nasogastric probe for 10 to 14 days and parenteral food is indicated. There are authors who take advantage of the Amplatz sheath to place a Malecot or Foley catheter inside the colon or duodenum, to control the debt and avoid peritonitis.In these cases, urinary drainage through a double J ureteral catheter may also be useful (3). If the lesion is larger or in case of doubt, open surgery should be indicated.

The case reported here presents the particularity of having the whole percutaneous procedure performed through the cecum, despite not identified

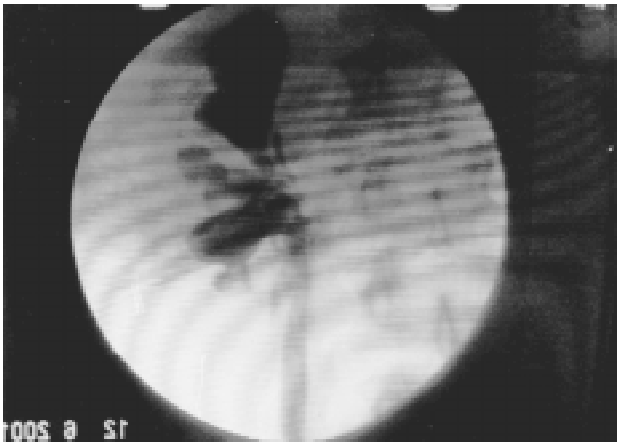

Figure 2 - *Normal descendent pyelography at the end of the surgery, showing stone-free right renal pelvis. The guide-wire is inside the ureter, and there is no contrast in the large intestine.*

intraoperatively. Taking into consideration that the puncture was not foreseen, and that there were two cecum openings, it is inferred that the cecum could be abnormally distended and dislocated upwards and backwards, conditions which would justify the complication.

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