CASE REPORT

Suture urolithiasis in the renal pelvis secondary to prior subtotal colectomy

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We report upon a patient who underwent a subtotal colectomy 2 years prior to presenting for a percutaneous nephrolithotomy of a large stone in the left renal pelvis. At the time of surgery, a non-absorbable suture was found embedded in the stone. Both stone and suture were removed percutaneously.

Key Words: kidney stone, foreign body, percutaneous renal surgery

Introduction

Foreign body induced urolithiasis is a well-known urological phenomenon. We report the first case of suture urolithiasis in the renal pelvis secondary to previous abdominal surgery for Crohn's colitis. The patient was treated successfully with percutaneous nephrolithotomy (PCNL).

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Case presentation and management

A 21-year-old female was admitted to hospital for treatment of recurrent urolithiasis with PCNL. Her past medical history was significant for anemia, erythema nodosum and Crohn's disease. The latter was diagnosed 6 years prior to her current admission. The patient's only previous abdominal surgery was a subtotal colectomy and end ileostomy for Crohn's colitis 2 years prior to her current admission. There were no complications at the time of that surgery.

Over the previous year, this patient had received treatment for recurrent bilateral urolithiasis in the form of ureteric stent insertions and extracorporeal shock

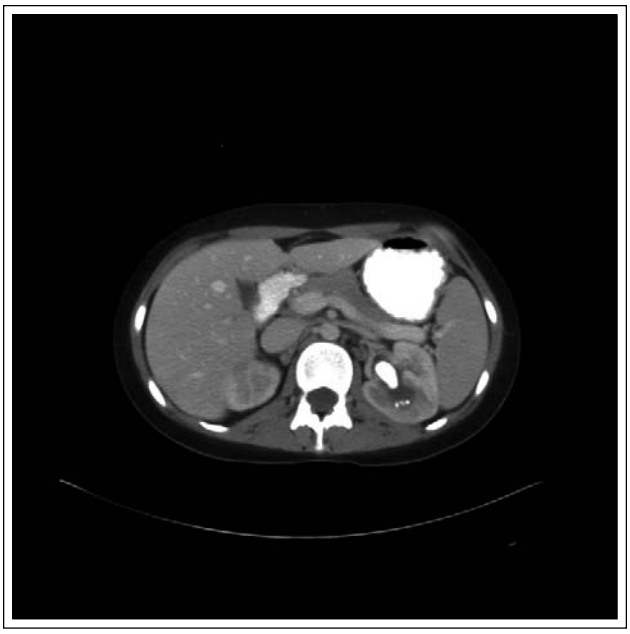

Figure 1. Computed tomography scan displaying 3 cm left renal pelvis stone.

wave lithotripsy for proximal right ureteric stones and a left PCNL for a 2.9 cm renal stone; no suture was identified during that surgery. On this admission, PCNL was performed for a recurrent 3 cm stone in the left renal pelvis, Figure 1. During this procedure, the knot of a 2.2 cm O polypropylene non–absorbable suture filament was noted to be extending through the wall of the renal pelvis and was embedded within the stone. This had served as a nidus for calculus formation. The suture was cleared from the renal pelvis by dividing it with the holmium laser and using various graspers to pull the remainder through the wall of the renal pelvis after fragmentation and removal of the stone. There were no complications. The patient was discharged from hospital the following day.

All stones were uric acid in composition and urine cultures were consistently negative.

Discussion

Foreign bodies in the urinary tract are a well-known cause of urolithiasis. Several different foreign bodies have been described as nidi for renal pelvic stones including; sutures, embolization coils, nephrostomy threads, surgical clips, sponges, and needles.[1-5] The majority of foreign bodies that have been found in the renal pelvis were the result of procedures performed directly on the kidney such as pyeloplasty, partial nephrectomy or percutaneous nephrostomy.[4,5]

Our case is unique in that this represents the first report of suture urolithiasis in the renal pelvis secondary to bowel surgery. It emphasizes the importance of urologists being watchful for unexpected foreign bodies when operating on patients for stone disease. When these are discovered in the urinary tract, removal is necessary because they will rarely be passed spontaneously and thus, put the patient at risk for recurrent urolithiasis, obstruction, infection and trauma. In our patient, percutaneous nephrolithotomy successfully removed both the foreign body nidus and stone fragments from the left renal pelvis. Careful avoidance of the urinary tract during abdominal surgery should make this type of complication uncommon. □

References

1. Coelho RF, Mitre AI, Srougi M. Intrarenal foreign body presenting as a renal calculus. *Clinics* 2007;62:527.
2. Saint F, Balon JM, Biserte J, Mazeman E. A renal foreign-body stone as a complication of myelography. *BJU Int* 2000;85:969.
3. Ruchik S, Wong P. Migration of arterial embolization coils as nidus for renal stone formation. *J Urol* 2002;167:2520.
4. Aslan P, Hall SC, Preminger GM. Suture nidus as a cause for renal nephrolithiasis. *Urology* 1998;52:707.
5. Ahn J, Trost DW, Tropham SL, Sos TA. Retained nephrostomy thread providing a nidus for atypical renal calcification. *Br J Radiol* 1997;70:309.