Hem-o-lok: A Nonignorable Cause of Severe Renal Calculus with Intrapelvic Migration

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To the Editor: A 71-year-old male was admitted to Department of Urology, The 3rd Xiangya Hospital, Central South University on June 26, 2014, because of lateral distending pain in the left back in recent 3 months. The patient's past medical history included retroperitoneoscopic left pelvilithotomy at 6 years ago. Physical examination showed left costovertebral angle tenderness when slightly tapped at left kidney region (affected area). In addition, plain X-ray of the kidney, ureter, and bladder (KUB) and abdominopelvic computed tomography scan showed multiple left renal stones with hydronephrosis [Figure 1a-1d]. After meticulous preoperative preparation, the patient, stayed at lithotomy position under general anesthesia, was admitted for flexible ureterorenoscopy with holmium laser lithotripsy. Unexpectedly, two stones were found at the left ureteral pelvis and subrenal calyx, respectively. The core of pelvic calculus was white strip funicular substance, which strongly attached to the pelvic mucosa and could not be removed by flexible ureterorenoscopy. The patient then was admitted for percutaneous nephroscopy with the guidance of B ultrasound. First, removing calculus at subrenal calyx out and then locating foreign body at renal pelvis [Figure 1e]. Thereafter, the foreign body at pelvis was removed using alligator plier. Finally, double-J tube and

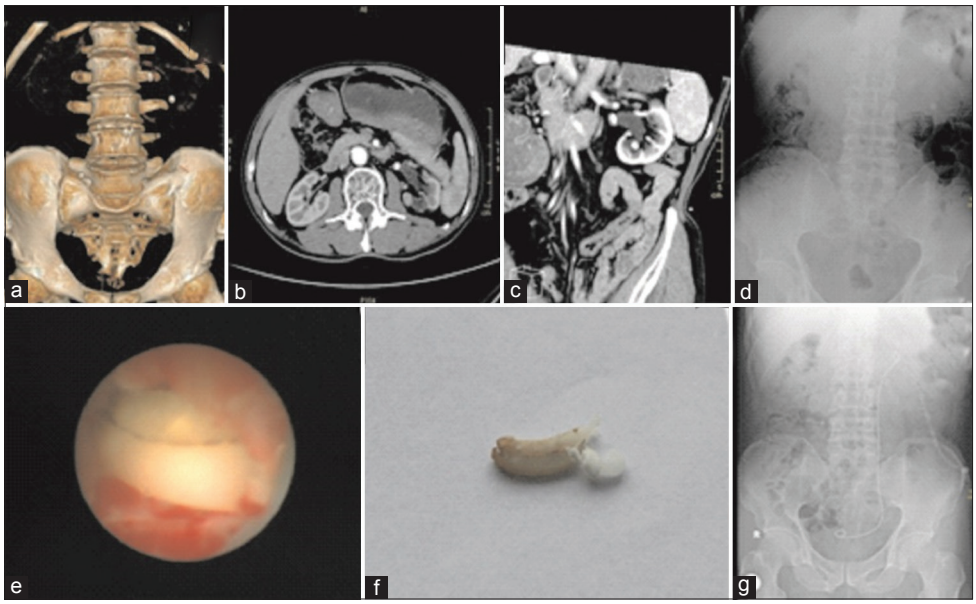

Figure 1: Kidney, ureter, and bladder examinations in a 71-year-old male patient. Preoperative three-dimensional reconstruction (a), cross-section (b), and coronal plane (c) computed tomography and X-ray (d) of kidney, ureter, and bladder showed multiple left renal stones with hydronephrosis. (e) Intraoperative finding of a foreign body at renal pelvis. (f) The foreign body was confirmed as Hem-o-lok clip via *in vitro* examination. (g) Postoperative X-ray of kidney, ureter, and bladder showed no significant residual stones in the left kidney.

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fistula were indwelled. After checking *in vitro*, the foreign body was Hem-o-lok clip [Figure 1f]. After the operation, the patient recovered uneventfully. KUB re-examination showed no residual stones in the left kidney [Figure 1g].

It is well known that Hem-o-lok, mainly used for suture ligation for hemostasis, has been widely used in laparoscopic surgery in urology. Although it is well-established and applicated in laparoscopic surgery, renal calculus formation caused by Hem-o-lok migration is the nonnegligible potential complications. Park *et al*.[1] reported a case of ureteral migration of Hem-o-lok after two years of laparoscopic right partial nephrectomy. Dasgupta *et al*.[2] also reported Hem-o-lok migrated into the renal pelvis with renal calculus formation. Although there existed uncommon cases related to Hem-o-lok migrating into renal pelvis with renal calculus formation, yet it is unknown how and why Hem-o-lok migrates into the renal pelvis. To our knowledge, based on previous surgical cases that the patient underwent laparoscopy at renal pelvis or collecting system, the common feature of these cases was that Hem-o-lok was used to replace conventional knot when the incision of the renal pelvis or collecting system was sutured as reported by Baumert *et al*.[3] If so, it may enable Hem-o-lok closely locating at the incision of the renal pelvis. Moreover, persistent tensile force of suture line may also facilitate Hem-o-lok migrating into renal pelvis before the sutures absorbed and embedded by the renal pelvis. However, more works should be carried out to uncover how and why Hem-o-lok migrates into renal collecting system.

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Conflicts of interest

There are no conflicts of interest.

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