

Bladder stone due to accidentally intravesically inserted intrauterine device

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Abstract Bladder stones occasionally develop due to foreign body in the bladder. A 45-year-old woman, who had had an intrauterine contraceptive device inserted 10 years earlier, presented with dysuria, frequency and voiding difficulty with suprapubic pain. The intrauterine device was found in the bladder with stone formation and was removed by cystoscopic procedure.

Keywords Bladder stone · Intrauterine device

Introduction

Migration of the intrauterine device (IUD) into adjacent organs due to perforation of the uterus has been reported previously, but not intravesically inserted IUD. Once an IUD has eroded into the bladder it usually becomes incrustated with calculus.

We report our experience in the treatment of bladder stone around IUD which was accidentally inserted into bladder.

Case report

A 45-year-old woman was referred to our urology department complaining of dysuria, recurrent urinary infection

and suprapubic area pain. Medical history revealed insertion of a Mirena IUD 10 years ago. But unexpectedly, the patient had become pregnant 1 year later and had undergone dilatation and curettage. Physical examination was normal. Urinalysis revealed microscopic hematuria, but a urine culture remained sterile. A plain radiography of the abdomen and computed tomography showed a 4 cm sized calculus inside the bladder (Figs. 1, 2). Cystoscopy demonstrated the stone attached to a string, a part of the IUD, which may accidentally had inserted into the bladder (Fig. 3). The stone was floating in the bladder and bladder wall was intact. The stones were fragmented by using crushing forceps without any injury or bleeding. All fragments of the stones and IUD were removed by a grasping forceps, cystoscopically. During postoperative period there was no complication and the patient was discharged on the postoperative second day.

Discussion

The etiology of foreign bodies in the bladder may be classified as follows: insertion by the patient him/herself, iatrogenic, or migration. And then these foreign bodies act as a nidus for stone formation in the bladder.

IUD has a great acceptance among many women and has been used for many years with low complication rate. Rarely, migration of the IUD into bladder due to perforation of the uterus has been reported, but not intravesically inserted IUD. In our case, computed tomography of the abdomen and pelvis showed the shadow of the stone totally inside the bladder, which implicates that the device might not had migrated, but had inserted into the bladder at first. Also, in the cystoscopic examination, the bladder wall was intact and the stone was floating in the bladder.

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Fig. 1 Plain radiograph showed an opaque stone in the pelvis



Fig. 2 Computed tomography showed a stone inside the bladder

A migrated or mislocated IUD in the bladder must be removed because of its complications.

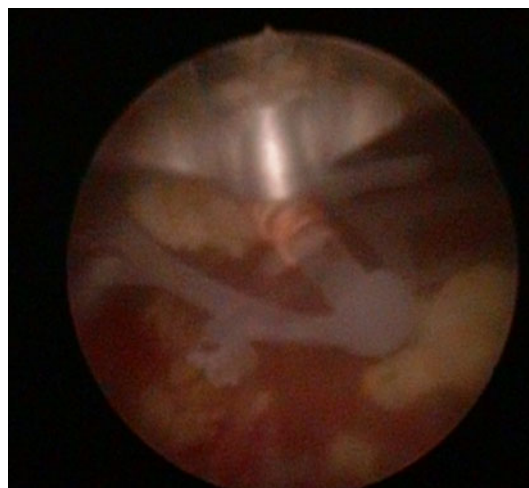


Fig. 3 Intrauterine device surrounded by calculus

Patients can present with irritative voiding symptoms, recurrent urinary tract infections, suprapubic pain, and hematuria in some cases. It can have a much more ominous sequence of events causing pelvic abscess, bowel obstruction and perforation, or bladder perforation with significant amount of morbidity and possible mortality. Treatment options vary and endoscopic techniques or suprapubic cystostomy can be useful for small calculus formation with IUD. Open surgery, or using of electrohydraulic lithotripsy can be considered for the removal of the big stone.

The present case emphasizes the importance of simple radiographic examination in the follow-up of a patient with an IUD. A migrant or mislocated IUD should be considered in patients with intermittent irritative voiding symptoms, or recurrent urinary tract infections, with a history of IUD insertion which later cannot be located.