

# Intravesical Migration of an Intrauterine Device

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## INTRODUCTION

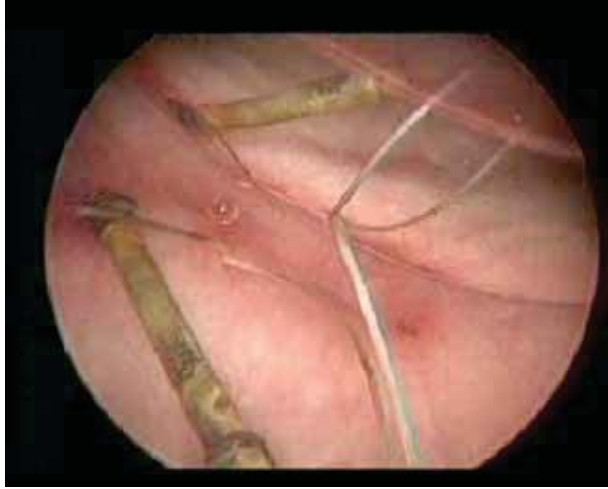
Intrauterine device (IUD) is the most commonly used, safe, and reversible method of contraception. Uterine perforation is a rare complication of IUD.<sup>(1-3)</sup> Migration could occur to the organs and cavity near the uterus. The exact reason is unknown. However, tissue damage, infection, adhesion, ischemia, and uterine perforation during or after the procedure were accused as way of migration to the bladder.<sup>(4,5)</sup> We present a case in which IUD migrated to the bladder.

## CASE REPORT

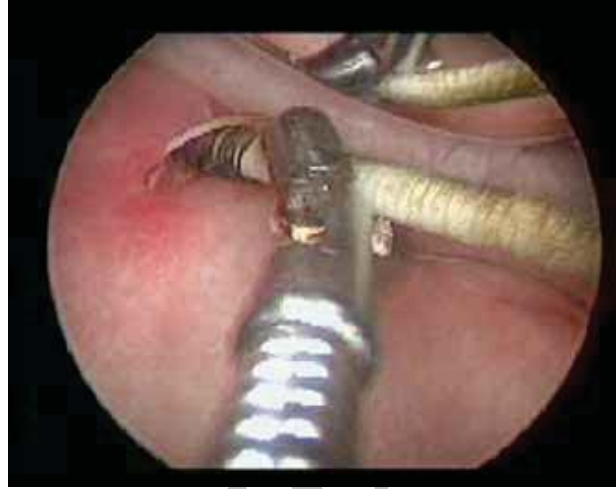
A 41-year-old woman presented with recurrent dysuria, pollacuria, microscopic hematuria, and urgency since 5 years ago. Intrauterine device insertion had been performed 15 years ago. She has been treated empirically with antibiotics many times elsewhere. She had a pregnancy two months after insertion of IUD without any complication, but our patient did not know whether IUD was removed after implantation. Since then, she had two pregnancies without any other contraceptive methods, but the curettage was applied.

Physical examination was unremarkable. At urinalysis, 56 erythrocytes and 78 leucocytes were found. Urine culture and creatinine were normal. The kidney, ureters, and bladder (KUB) x-ray revealed a T-shaped IUD on the suprapubic region. Pelvic ultrasonography showed echogenicity of the IUD to be partly intravesical. A hyperdense lesion was shown between the uterine wall and the bladder on computed tomography (CT).

Cystoscopy was performed and revealed an IUD, which partially penetrated to the bladder wall in the bladder lumen (Figure 1). There was no sign of inflammation, calculi, or fistula formation in the



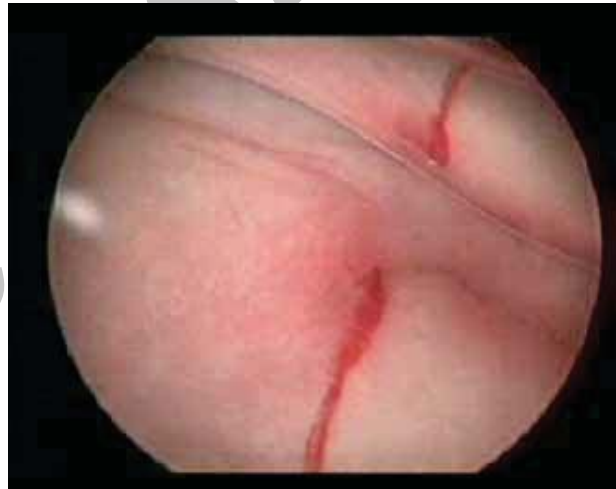
**Figure 1.** Intrauterine device had been partially penetrated to the bladder wall.



**Figure 2.** Gentle traction with grasper for intrauterine device in the bladder lumen.



**Figure 3.** Intrauterine device is taken with grasper.



**Figure 4.** Post-removed image of the intrauterine device.

bladder. Intrauterine device was grasped with endoscopic forceps (Storz, Tuttlingen; Germany) and extracted with gentle traction (Figures 2 and 3). Bladder perforation that occurred at the end of the procedure was managed conservatively (Figure 4). There was no complication on the 1<sup>st</sup> postoperative day and had an indwelling transurethral catheter for 7 days with excellent outcome. The patient was constructed to attend annually for outpatient visits and to seek medical help if lower urinary tract symptoms recur.

## DISCUSSION

Intrauterine device is one of the most effective and reversible

contraceptive methods worldwide. However, it can lead to complications, such as uterine perforation, undesired pregnancy, pelvic inflammatory disease, bowel perforation, vesicouterine fistula, abortion, and infection.<sup>(1-3)</sup> Uterine perforation incidence ranges from 1 to 3 per 1000 insertions in literature.<sup>(6,7)</sup> It becomes more susceptible due to reduction in size of the uterus, thinning of the uterine wall, and hypoestrogenemia in the lactation and postpartum periods.<sup>(2,3,8)</sup> Generally, IUD migration occurs to the adjacent organs; however, migration to the peritoneum, omentum, appendix, and colon were also reported in the literature.<sup>(9,10)</sup>

The exact pathophysiology of perforation is unknown. How-

ever, most authors believe that IUD placement by specialists is very important in preventing perforation primarily.<sup>(1,2,8)</sup> Another hypothesis supports slow migration of the IUD through the bladder due to infection, adhesion, and tissue damage caused by the vaginal speculum during IUD insertion.<sup>(4,5)</sup>

Uterine perforation due to IUD is frequently a silent clinical situation. Related symptoms, such as chronic pelvic pain, dysuria, pollacuria, microscopic hematuria, pyuria, dyspareunia, recurrent and persistent urinary tract infection, vaginal discomfort, calculi, incontinence, fistula, and actinomyces infections, can occur before the diagnosis ranging from 3 months to 5 years. The period between insertion and retrieval of the device ranges from 6 months to 16 years.<sup>(11)</sup> These patients may have multiple antibiotic therapies if they are not evaluated appropriately.<sup>(1-5,12-15)</sup>

Approximately, 80 cases of IUD migration to the bladder have been reported in the literature.<sup>(10)</sup> The most accurate methods for diagnosis of lost IUD are radiography, ultrasonography, intravenous urography, CT, and cystoscopy. Partial perforation as well as stone formation can also be shown with these imaging studies. Although CT is the most effective imaging method for diagnosis, but cystoscopy is the optimal therapeutic approach to manage IUD migration to the bladder.<sup>(1-15)</sup> Minimally-invasive methods, such as laparoscopy or endoscopy, are standard approach for removal of migrated IUD. Open surgery is generally used for subjects with failed endoscopic surgery.<sup>(1-15)</sup>

## CONFLICT OF INTEREST

None declared.

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