Laparoscopic Removal of a Migrated Intrauterine Device

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INTRODUCTION

Using intrauterine device (IUD) is the most common method of contraception worldwide. However, there is a risk of its migration and damage to the intra-abdominal organs.[1] According to the recent reports, perforation of the uterus by IUD is seen in 0.05 to 13 cases out of 1000 IUD insertions.[2] The primary rupture of the uterus has been reported at the time of IUD insertion; however, the secondary or delayed rupture is more common and seems to be due to the spasms of the uterus.[2]

Concerning the risk of adhesion and injury to the intestine and bladder, surgical removal of the intra-abdominally migrated IUD is recommended and 2 methods of open surgery and laparoscopy have been reported for this purpose.[3] Open surgery is accompanied by complications such as cosmetic problems and longer hospitalization, and laparoscopy may be an appropriate treatment of IUD migration because of a better view, more magnification, and a smaller surgical incision. We report a case of IUD migration into the pelvis in a young woman.

CASE REPORT

Our patient is a 35-year-old woman who has been using IUD for 5 years after her first labor. The IUD was removed because of her willingness for pregnancy, and thereafter, she had bleeding for 20 days. She conceived her second child and after the second labor, an IUD was inserted. Three months later, she experienced suprapubic pain during diuresis. She did not have hematuria or other urinary symptoms and her medical examination was unremarkable. Routine laboratory tests including urinalysis had normal results. The patient underwent ultrasonography and increased thickness of the anterior wall of the bladder with a soft tissue mass and the IUD in the space between the bladder and the uterus were detected. On plain abdominal radiography, the shadow of the IUD was seen in the middle of the pelvic space, and computed tomography confirmed the IUD in the space between the uterus and the bladder (Figure 1). The patient then underwent cystoscopy and a prominent mucosal dome was detected in the bladder formed due to the pressure from the outside. The IUD was not seen in the bladder and the bladder mucosa was intact. Finally, the diagnosis of IUD migration from the uterus into the space between the bladder and the uterus was confirmed and laparoscopic method was chosen to remove it.

Following general anesthesia, 3 ports were made with the patient in the supine position. One was placed 10

Figure 1. Detection of the intrauterine device by imaging. **Top,** Plain abdominal radiography. **Bottom,** Intrauterine device in the space between the bladder and the uterus on computed tomography scan.

mm from the umbilicus for the camera and 2 were placed in 5-mm distance in the pararectal parts at the level of the umbilicus on the right and left (Figure 2). In laparoscopy, a space in the anterior part of the

Figure 2. Trocar insertion sites for laparoscopy. Large midline incision was avoided by this approach.

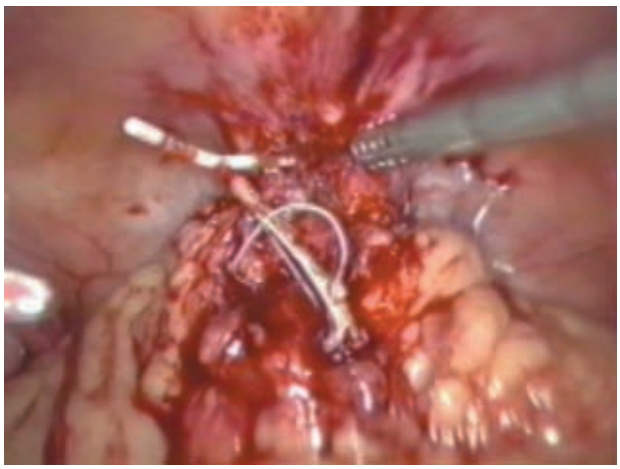

Figure 3. The intrauterine device was freed from the adjacent adhesions between the bladder and the uterus.

uterine covered by the omentum was seen. After releasing the adhesions, the IUD was removed within 15 minutes (Figure 3). The patients' catheter was removed 2 days later, and then, she was discharged from the hospital. No complication was seen during the procedure and the patient did not have any problems during the 3-month follow-up.

DISCUSSION

Migration of the IUD into the abdominal cavity is very rare. In our review of the literature, 165 cases of IUD migration have been reported since 1999. The most common places for this migration are the omentum, rectosigmoid colon, peritoneum, and bladder. Other rare places for IUD migration include the appendix, small intestine, adenexes, iliac veins, secum, perirectal fat, retroperitoneal space, Douglas pouch, and ovaries.[4-9] Most of the authors recommend removal of the copper IUD in case of migration, because inflammatory responses can cause intestinal obstruction and visceral perforation. Laparotomy and laparoscopic management have been used for IUD removal in the cases with IUD migration. Since laparatomy is accompanied by more manipulations, more scarring, and longer hospitalization, and has a more limited view during the operation, laparoscopy has now become the method of choice for the treatment. Successful treatment of IUD migration by laparoscopy has been reported in a few cases.[3,6-8] The average period of laparoscopy has been reported to be 25 minutes and the maximum hospital stay to be 1 day, which are significantly shorter than those for open surgery.

No complication has so far been reported by this method. Injury to the intestine needing repair and sepsis have been considered as the contraindications for laparoscopy.[6,8] However, in such cases, laparoscopy is a fast, easy, and noninvasive method for the diagnosis of the place of the IUD and its removal.

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