



A new technique for the removal of a transmigrated intrauterine device with rectum penetration

To the Editor,

The intrauterine device (IUD) is among the most common reversible contraception products available worldwide. IUDs were first introduced more than a century ago, and many designs have been developed subsequently in order to improve their safety and efficacy. The most serious complication associated with IUD insertion is uterine perforation. Although uterine perforation is a rare complication with an estimated incidence of 0 to 10 perforations per 1,000 insertions, it can cause serious morbidity and mortality. In this report, we present a rare case in which the rectal transmigration of an IUD was addressed through endoscopic removal using a rubber band traction technique and did not require surgery (1,2).

A 32-year-old woman (para 2, gravida 2) presented to the gynecology department with the complaint of delayed menstruation. She reported having an IUD inserted 3 years previously. Gynecologic examination, as well as pelvic and transvaginal ultrasonography, revealed a uterus that was enlarged to 10 weeks gestational size with a single viable fetus (9 weeks and 6 days), and an IUD that was detected inside the posterior uterine wall (Figure 1). The patient was informed about all possible risks and complications. However, she preferred to continue her pregnancy and elected for evaluation after delivery.

The patient had an uneventful antenatal follow-up and a spontaneous vaginal delivery of a live healthy baby. The position of the IUD, embedded in the posterior wall of the uterus, was unchanged during the antenatal follow-ups and after the delivery. Although further evaluations for the transmigrated IUD were recommended following a second discussion regarding all possible risks and complications, the patient once more elected not to accept the recommendation.



Figure 1. Fetus and intrauterine device (IUD).



Figure 2. Endoscopic appearance of the transmigrated intrauterine device (IUD) with strings in the rectum.

She presented to the gynecology department describing the sensation of strings near her anus 15 months after delivery. An anal inspection did not reveal abnormalities; however, strings were felt during the digital

Address for Correspondence: Hüseyin Savaş Göktürk, Department of Gastroenterology, Baskent University Faculty of Medicine, Konya, Turkey
E-mail: savasgokturk@yahoo.com

Received: February 25, 2013 **Accepted:** July 10, 2013

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Figure 3. Endoscopic appearance after traction.

rectal examination. Colonoscopy revealed that the transverse arms and a part of the horizontal arm of the IUD had penetrated the rectum at 10 cm with protruding strings in the lumen (Figure 2). Retrieval of the IUD by pulling on the threads was attempted but unsuccessful, as the IUD was firmly adherent to the colon wall. Because pulling the strings vigorously to remove the IUD could have resulted in intestinal defects that may have required surgical repair, we decided to remove the IUD by applying traction force. A rubber band was fastened to the strings of the IUD and was stretched by pulling it thorough the anus where the free end of the rubber band was fixed to the buttocks with adhesive tape (Figure 3). The patient was called, and traction applied by the rubber band was checked every other day. On day 4 of the procedure, the IUD was expelled. The area in which the IUD had been embedded was clear.

The present case report describes a rectal transmigration of an IUD and its endoscopic removal using a rubber band traction technique without the need for surgery. IUDs are among the most common reversible methods of contraception worldwide. Uterine perforation is the most serious complication associated with IUD insertion, with an estimated incidence of 0 to 10 perforations per 1,000 insertions. Perforations commonly occur at the time of insertion or shortly thereafter, but may also occur many years later. Although the exact mechanism of IUD transmigration accompanied by uterine perforation is not known, the most important risk factors are the skill of the operator; the features of the IUD; the size, shape, and configuration of the uterus; past operations; and timing of insertion after delivery. In the present case, uterine abnormali-

ties were not detected, and there was no previous operation history (3-5).

It should be noted that the majority of uterine perforations do not affect other organs; however, 15% of cases lead to complications in adjacent organs, specifically the intestine. Intestinal complications caused by IUD migration include obstruction, infarction, perforation, fistula formation, and mesenteric injury. Penetration of the intestine by an IUD occurs most commonly in the sigmoid colon (40.4%), followed by the small intestine (21.3%) and rectum (21.3%). Patients presenting with uterine perforation may experience pelvic pain, excessive bleeding, and fever; however, migration may be asymptomatic in approximately one-third of patients. The triad of symptoms most often experienced by women with intestinal injuries includes chronic abdominal pain, fever, and intermittent diarrhea. In the present case, however, the patient complained of feeling strings near her anus (6-8).

The diagnosis of a transmigrated or dislocated IUD is made by clinical, radiological, and ultrasonographic examination. However, pregnancy should be ruled out before any diagnostic procedure. Other examinations, including hysterothy, hysteroscopy, colonoscopy, and laparoscopy, should also be performed as needed. Despite the presence of an IUD, an unexpected pregnancy occurred in our patient. Once the diagnosis of a transmigrated IUD has been made, a plan for the removal of the IUD must be made as well. Recommendations on how and when to remove a transmigrated IUD differ. For example, both conservative management in certain asymptomatic patients and immediate removal with laparoscopy or laparotomy have been suggested. The choice of the procedure will depend on the location of the IUD in the abdominal cavity, extent of adhesions, relationships with other organs, possible complications, and patient preferences. Colonoscopy has been used to remove IUDs (9,10), although this procedure appears to be safe only if the IUD is free in the lumen or partially embedded in the colonic wall. Pulling the strings of the IUD firmly with biopsy forceps can result in colonic wall defects, colonic perforation, and peritonitis, and these complications may require urgent operation. We applied continuous traction force using a rubber band that allowed for healing of the defect while removing the IUD from the colonic wall. To the best of our knowledge, this method of IUD removal from the rectum without surgery has not been used previously (11,12).

Informed Consent: Written informed consent was obtained from patient who participated in this study.

Peer-review: Externally peer-reviewed.

Author contributions: Concept - A.T., H.S.G.; Data Collection&or Processing - E.T.; Literature Search - H.S.G.; Writing - H.S.G.

Conflict of Interest: No conflict of interest was declared by the authors.

Financial Disclosure: The authors declared that this study has received no financial support.

Erzat Toprak², Hüseyin Savaş Göktürk¹, Ahmet Tolu³

¹Department of Gastroenterology, Başkent University Faculty of Medicine, Konya, Turkey

²Department of Obstetric and Gynecology, Başkent University Faculty of Medicine, Konya, Turkey

³Department of General Surgery, Başkent University Faculty of Medicine, Konya, Turkey

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