

Removal of a Missing Intrauterine Device via Laparotomy After 28 Years of Insertion: A Case Report

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ABSTRACT

Intrauterine device is one of the most preferred contraceptive methods. Rare complications such as uterine perforation were getting more common due to increased use of intrauterine device and could be seen either with mild manifestations or serious cases like bladder or intestinal damage.

A 48-year-old patient who is consulted to our clinic because of a missed copper intrauterine device was presented. The intrauterine device was inserted 28 years ago, detected in pelvis incidentally by x-ray and extracted via laparotomy. Although device has been in abdomen for nearly three decades, we did not see any serious reaction or adhesion during surgery.

Management of a patient with intrauterine device should be done carefully and following the instructions before insertion, regular examination at every visit are important.

Keywords: Intrauterine devices, Uterine perforation, Ultrasonography, X-rays

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Introduction

Intrauterine device (IUD) is a popular contraceptive method, which was preferred by 14.3% of women in the world (1). Although it is preferred frequently both for high efficiency and long-lasting reversible contraceptive effect, serious complications such as uterine perforation during insertion could be seen. Uterine perforation could be seen either with mild or severe manifestations or severe cases like bladder or intestinal damage. Expulsion, abortion of IUD without notice of the patient, is another issue that especially occurs in the first month after the insertion. If IUD could not be seen in the uterine cavity

after insertion, abortion or uterine perforation could be possible. The aim of this case report is to contribute to the management of missed IUDs.

Case Report

48-year-old, gravidity 3, parity 3 woman referred to a healthcare provider to have an IUD in 1988. Patient told that she did not have any problem during and after IUD application. She was diagnosed with an 8-week intrauterine pregnancy when she had applied to the same institution 4 months after insertion because of delayed menstruation. After ultrasonographic examination, it was thought that she got pregnant due to spontaneous expulsion of the IUD. After a routine pregnancy follow-up, she gave birth at term to a healthy baby by vaginal delivery. As the patient did not have any problems at the postpartum period, it was understood that no further investigation for missed IUD had been made.

In 2016, the patient came to an orthopedic specialist for a routine follow-up and told him that she felt pain at the hip joint. A presumptive diagnosis of hip joint osteoarthritis was made and an x-ray was taken. The IUD was seen close to the left hip joint at pelvic x-ray (Figure 1). After that, the patient was consulted to Hacettepe University Obstetrics and Gynecology Department.

In our clinic, it was confirmed that there was no IUD in uterine cavity by transvaginal ultrasonography and surgery was planned. Due to being close to pelvic lateral wall and possible IUD-related pelvic adhesions which could be occurred in this long period, Pfannenstiel laparotomy was chosen. During laparotomy, it was observed that IUD had been completely em-

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bedded into omentum which had been an 8 cm indurated pelvic mass (Figure 2). No adhesion was detected. Partial omentectomy was made and patient was discharged on the second postoperative day. No complication was seen during the postoperative period and following two months. Written informed consent for this report was also obtained from the patient.

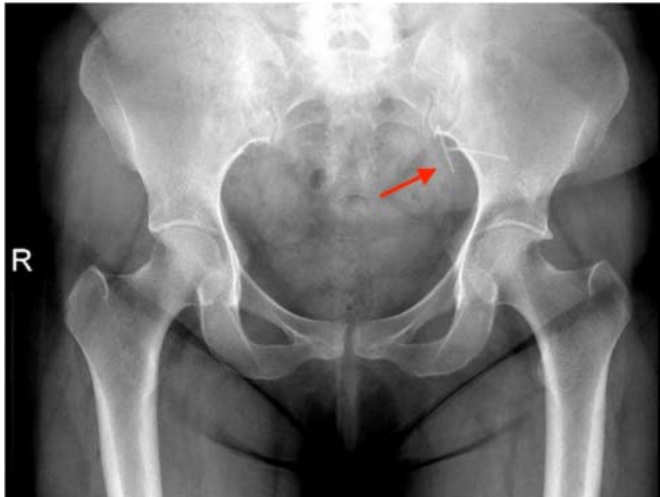


Figure 1: Pelvic x-ray shows intrauterine device outside the uterus

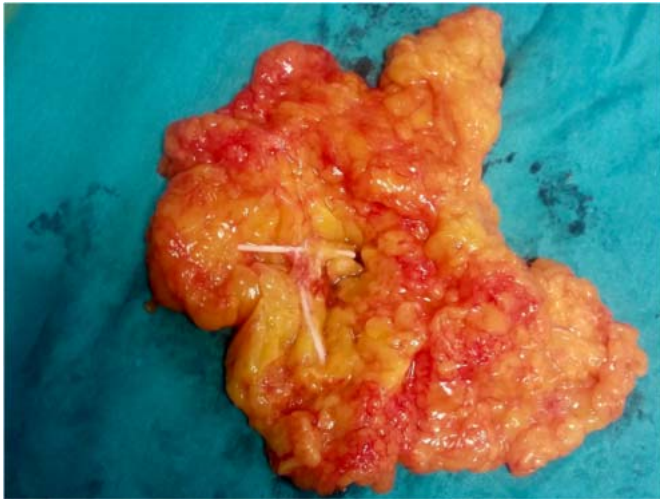


Figure 2: Intrauterine device embedded in the omentum

Discussion

Intrauterine device is preferred for providing long-term protection and not requiring any special effort by the patient. It is a method with high contraceptive efficiency and annual pregnancy rate of copper devices is reported between 0.5% and 1% (2). Genital infections, menorrhagia, pain, uterine perforation and increased risk of ectopic pregnancy are major complications associated with this method. Thus, correct patient selection is an important step in preventing these undesirable effects. Circumstances such as pregnancy, genital cancers, copper allergy, presence of pelvic infection, uterine abnormalities, unspecified abnormal bleeding constitute the main contraindications for the use of IUD.

Uterine perforation is one of the most important complications of IUD. Rate of uterine perforation due to using of IUD was stated as 0.1% in a study conducted by World Health Organization (WHO) (3). Perforation at the time of application is more common and probably the earliest complication of IUD. Rarely, cases of IUD migration into uterine wall and gradual development of perforation over a long period have also been reported (4). Increase risk of uterine perforation in postmenopausal people or patients on prolonged treatment with corticosteroid was reported in literature probably due to endometrial thinning which facilitates transmigration (5).

Intrauterine device application in early postpartum or lactation period is thought as an important risk factor for uterine perforation. A study has identified an increased risk of uterine perforation while inserting the IUD in the first 3 months of the postpartum period and stated that it is more appropriate to place IUD after postpartum 6 months (6). Additionally, there are studies suggesting that uterine perforation in the breastfeeding period is difficult to be diagnosed (7).

First clinical examination was suggested at 6-8 weeks after IUD insertion and then, annual follow-up should be advised to the patient. IUD string should be evaluated with speculum examination and localization of the IUD should be determined by imaging methods. Ultrasonography is used as the first choice for this purpose. Ultrasonography could detect IUD which is embedded in the uterus but did not exceed serosa. If IUD is not seen at intrauterine space, localization could be determined with an x-ray. Tomography and magnetic resonance imaging are other advanced techniques that could also be used to determine the localization of the IUD (8).

In this case, physician who did not see the string of IUD might have thought that IUD expelled spontaneously and therefore pregnancy was occurred. There are serious complications such as appendicitis, perforation of bladder or colon caused by missed IUD in the abdominal cavity and for this reason, it is important to make an accurate assessment (9,10). In our case it was interesting that IUD had stayed in the abdominal cavity for a long time without any serious reaction or adhesion. This could be due to the restriction of IUD by omentum. In the literature, some studies indicated that especially copper IUD could cause serious inflammation or adhesion after uterine perforation and laparotomy should be preferred in these cases (11). On the other hand, some studies showed that IUDs could cause short term, self-limiting and local inflammation and there was no difference between copper and levonorgestrel-releasing IUDs in terms of inflammation and adhesion (12).

There are different options about the management of missed IUD. Although there are some studies reported that removal of missed IUD is not necessary because of its limited reaction, extraction by laparoscopy or laparotomy is mostly suggested and preferred methods (13). Some other specific

procedures can also be done according to localization of IUD. For example, in a study by Medina et al, an IUD penetrating colon was revealed by colonoscopy (14).

In conclusion, the management of a patient with IUD should be done carefully. Following the instructions step-by-step before insertion, regular check-ups and adequate examination at every visit are important parameters to prevent complications. Uterine perforation may be asymptomatic for years as in our case. Radiological investigation especially pelvic x-ray should be done when IUD is not seen in the uterine cavity. With the development of new technologies, smart IUDs may help the clinician in the near future (15).

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