

Lost intrauterine contraceptive device inserted 42 years before: a case report

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Summary

Objective: The management of a lost abdominal intrauterine contraceptive device (IUD) is discussed together with a review of the relevant literature. **The case:** The IUD is one of the most commonly used, effective, cheap and safe methods of contraception in Turkey. However, IUD insertion may result in uterine perforation which may lead to a variety of abdominal complications or can remain asymptomatic in the abdomen for a long time without causing any complications. An asymptomatic case of a woman with an IUD inserted 42 years before is presented. To the best of our knowledge this is the longest time an IUD (found by X-ray) has been localized in the abdomen. **Conclusion:** We suggest that in asymptomatic patients with an IUD localized in the abdomen, the risks of both operating and not operating should be discussed thoroughly and in such cases, follow-up without surgery may be considered as an alternative approach.

Key words: Intrauterine contraceptive device; Lost intrauterine device; Uterine perforation.

Introduction

The intrauterine contraceptive device (IUD) is the most commonly used method of modern contraception used in Turkey [1]. Many couples prefer it because of its convenient use, inexpensiveness, effectiveness and reliability. The mechanism of how an IUD works is by creating a sterile area of inflammation that acts to prevent implantation within the uterus. Copper IUDs enhance the effect of sterile inflammation [2]. However, although the device is an effective and reliable method, IUDs also bring with them potential complications.

An asymptomatic case of a woman with an IUD inserted 42 years before and found by X-ray to be localized in the abdomen is presented. The management of IUDs lost in the abdomen will be discussed together with a review of the relevant literature.

Case Report

A 62-year-old patient, ten years into menopause, presented at our clinic in March 2010 with complaints of urge incontinence. From the patient's history, it was learned that an IUD had been inserted 42 years before but that she had become pregnant four months after the insertion, being informed at that time that the IUD had fallen out. Experiencing a normal vaginal delivery, the patient stated that subsequent to this pregnancy and birth, she had given birth yet once more and had also undergone six dilation and curettage (D&C) procedures. When the patient appeared before a doctor 12 years ago in 1998 with complaints of abdominal pain and urolithiasis, abdominal and pelvic X-ray revealed an IUD localized in the abdomen. The patient was referred to an obstetrics and gynecology specialist. A probe curettage was performed on the patient but the IUD could not be found. Later, laparoscopy was carried out; when the IUD

could still not be located, a laparotomy was next performed but again, no IUD was found.

The abdominal examination of the patient revealed no sensitivity or defensive reaction in any quadrant of the abdomen nor was any mass manually detected. The patient's pelvic examination revealed a 1st-2nd degree cystocele but no IUD string was observed. In the transvaginal ultrasound that was conducted, the uterus and ovaries were of a size compatible with the age of the patient but again, no IUD could be seen inside the uterus. When a direct abdominal X-ray was taken of the patient in an erect position, the IUD was finally seen in the abdominal region (Figure 1). The patient's urinary incontinence was controlled with medical treatment. This case was presented to the consultative board, which decided, based on the fact that the patient was asymptomatic, that the IUD would not be removed and the patient would be monitored.

Discussion

Although the IUD is an effective and reliable method of contraception, it may give rise to certain side-effects and complications. These may be set down as uterine perforation, increased menstrual flow, pain in the lower abdominal quadrant, increased risk of pelvic inflammation, risk of ectopic pregnancy or spontaneous abortion if pregnancy occurs when the IUD is still in place [3].

There are a few possibilities to explain when the IUD string does not appear in the vaginal examination. It might be that the IUD fell out with the patient being unaware of it, or the IUD string was retracted into the cervix or uterus, or that the IUD was drawn into the uterus as the uterus expanded during pregnancy, or as a result of uterine perforation the IUD moved into another extrauterine location [4].

Uterine perforation is a serious complication associated with IUDs [5]. A perforation may occur during the insertion of the IUD but sometimes it can happen sponta-

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Figure 1. — X-ray showing the IUD in the abdomen.

neously or during the postpartum period [6]. In the literature, the incidence of uterine perforation associated with an IUD is reported as approximately 0.5-1.3/1000 [5, 7]. As much as uterine perforation is a rare complication, it is a cause of high morbidity and, albeit uncommonly, high mortality [8].

Several factors have been set down in the etiology of uterine perforation. Apart from the inexperience of the person inserting the IUD, the most important of these are the insertion of the IUD early on in the postpartum period, undetected uterine pathologies, and a decrease in myometrial thickness [9, 10].

The IUD may change its location within the abdomen in the event of perforation. If this happens, the IUD may remain within the abdomen asymptotically or it may cause complications. IUD-related intestinal injury may take place, in which case there may be abdominal pain, fever and intermittent diarrhea [4]. An IUD localized in the abdomen may also perforate the rectum and pass into the lumen of the rectum [11]. Interestingly, in one case where an IUD had invaded the rectal lumen, the strings were felt in the anus [12]. Sometimes, the IUD forms a closed ring in the abdomen, giving rise to intestinal obstruction [13]. Apart from these examples, the literature also reports cases where the IUD has caused an abscess in the abdominal wall or caused bladder damage [14].

In the event there is perforation during the insertion of the IUD, the patient may experience pain and discomfort. Although perforation, either during the insertion of the IUD or later, is not a frequent occurrence, perforation should be suspected when women have complaints immediately after insertion; if the strings are not visible during pelvic examination, an investigation should immediately ensue [15, 16].

Ultrasound is the best imaging method for verifying the absence of an IUD in the uterus but its success in determining the abdominal localization of the IUD is limited. A pelvic or abdominal X-ray is useful in determining the

existence of an IUD in the abdomen. Computed tomography (CT) or magnetic resonance imaging (MRI) might be helpful in finding an IUD [17] yet might not be effective in determining its exact location. It is reported that the use of fluoroscopy in determining localized IUDs or other foreign objects in the abdomen may lead to success [18]. Three-dimensional abdominal ultrasound as well has been used to locate IUDs lost in the abdomen [19].

In the planning for retrieval of an IUD in the abdomen, the first choice is the less invasive method of laparoscopy [20, 21]. If the IUD can not be located with laparoscopy, or its removal is not possible due to adhesion or perforation of major organs such as the intestines or bladder, via laparoscopy a laparotomy can be performed [18]. One study states that in 16% of cases where the IUD had been planned to be removed via laparoscopy, a laparotomy was subsequently initiated [20]. In one case of a lost IUD, Sajjad and colleagues note that a laparoscopy was performed after the IUD was spotted via X-ray in the lumbosacral joint but when it could not be traced, a laparotomy was conducted at a later date. The laparotomy revealed that the IUD was completely buried in the small intestine. Due to dense fibrosis, it was not possible to remove the IUD and therefore resection was performed [16].

The failure to find an IUD during the procedure is the most frequent and avoidable reason for moving to a laparotomy from a laparoscopy. A laparotomy may be needed if the IUD, which was freely moving in the abdomen or perhaps adhered to the intestines, changed its place intraoperatively [18]. Failure to detect the IUD in an unsuccessful laparoscopy may also be because the IUD is buried in the mesentery or peritoneum. As in the case being discussed here, sometimes an IUD may not be found even with laparotomy and the operation may fail. An IUD which is difficult to find during surgery may benefit from the use of an intraoperative fluoroscopic imaging intensifier. Oliver *et al.* describe their real-time intraoperative use of a fluoroscopic imaging intensifier, reporting success in the laparoscopic removal of lost IUDs in the abdomen of four cases. They further defend that this method can be used to find the exact location of the IUD and that laparoscopic instruments may act as guides in locating the device [18].

If the dislocated IUD in the abdomen is symptomatic, removal is advised by many [8, 22]. On the other hand, management in the case of asymptomatic lost IUDs is arguable. Particularly in the case of management of IUDs that have remained in the abdomen for a long period such as 35 years, there is as yet no definitive approach [23]. In general, because of the potential danger to nearby organs and for medico-legal reasons, whatever the type of IUD or where it is localized, and even though the patient might be asymptomatic, the recommendation is for removal as soon as the device can be found [22, 24]. Many clinicians believe in the necessity of removal due to possible perforation of the intestines or the potential obstruction that such an IUD may create [6, 25]. In a very recent case study, Chell and Lipscomb reported a severe abdominal wall abscess of high morbidity in a patient who had had

an IUD inserted 35 years before. The researchers recommend that the device in the abdomen be removed even if it has been there for years [14].

There are others who oppose this view and who defend the idea that IUDs should be left in place if the patient is asymptomatic [26]. The reasons given for this perspective are based on the belief that the potential for surgical complications in removing an IUD may be much more than what is entailed in leaving the device where it is [26]. Some studies suggest that non-copper IUDs should be left in place to avoid any complications that may be associated with surgery and anesthesia [27]. Markowitch and colleagues maintain that adhesions of the IUD in the abdomen occur immediately after perforation of the uterus and that these adhesions prevent the lost IUD from moving around further in the abdomen. They suggest that the device may remain as is without causing complications if the patient is asymptomatic [26]. Fortunato *et al.* as well share the same opinion and hold that IUDs that have remained in the abdomen for long periods of time should not be touched, recording this situation as another example of the principle of "First, do no harm." [23].

To the best of our knowledge, in a review of the literature, the longest period recorded of an IUD that has been lost inside the abdomen was 35 years [14, 23]. Only in one case was an old form of IUD (Gräfenberg ring) found 39 years later in the myometrium in the pathological examination of the uterus after a hysterectomy [28]. In the present case study, an IUD remained in the abdomen for an unprecedented 42 years with no symptoms appearing whatsoever. Subsequent to the uterine perforation and the change of location in the IUD, the patient had two normal deliveries and six D&Cs. Because she was asymptomatic and a second laparoscopy or laparotomy would pose a risk of high morbidity and complications, the medical consultative board decided upon keeping the patient under follow-up.

Conclusion

Uterine perforation and the subsequent change of location of an IUD in the abdomen presents as a rare but serious complication. The insertion of IUDs by experienced and competent healthcare professionals will reduce the risk of uterine perforation. Patients should be informed of the possibility of this complication at the time the IUD is being inserted and their informed consent should be obtained. An investigation should immediately be conducted in the case of a lost IUD, with periodic examinations of the patient undertaken even though the patient may have no complaints. If a retrieval of the IUD in the abdomen is planned, the first alternative to consider should be laparoscopy. It is believed that in the event the IUD cannot be found in this operation, the use of intraoperative fluoroscopy imaging intensifiers or other imaging methods may increase the potential success of the laparoscopy and reduce the possibility of having to perform a laparotomy. We suggest that in asymptomatic patients with an IUD localized in the abdomen, the risks

of both operating and not operating should be discussed thoroughly and in such cases, a follow-up without an operation may be considered as an alternative approach.

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