

Management of an Intrauterine Device Migration Resulting in a Pregnancy – Clinical Case

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ABSTRACT

Intrauterine devices (IUD) are one of the most commonly used methods of contraception worldwide. The long term effect makes it desirable by most patients. The insertion of an IUD is not difficult as a technique but it involves multiple complications such as uterine perforation and migration into the abdominal cavity, urinary bladder perforation, fistula formation, bowel perforation and intra-abdominal adhesions.

We present the case of a 31-year-old female patient (para=4) with a medical history of an IUD insertion during her postpartum period in February 2018. In April 2019, during her normal follow up consultation, the speculum examination did not detect any IUD strings and the abdominopelvic ultrasound showed no signs of the device inside the uterine cavity. A subsequent X-ray identified the device in a horizontal position in the pelvic region. The patient was scheduled for surgical intervention, but in the meantime she became pregnant. Decision to continue with the pregnancy was taken and surgery was delayed until the postpartum period. In August 2020, a laparoscopic surgical procedure was performed; during the intervention, the IUD was identified in the anterior rectal wall with only the strings exiting the wall. Therefore, a visceral surgeon advice was required. The device was removed by continuing the laparoscopic intervention. The patient was given antibiotic treatment and had a favorable evolution. Although IUD is thought to be an easy and accessible method of contraception, complications such as uterine perforation must always be taken in consideration and well explained to all patients.

Keywords: intrauterine device, uterine perforation, pregnancy.

INTRODUCTION

Intrauterine devices (IUDs) are one of the world's most well-known and modern ways of contraception (1). Significant complications are not expected during insertion; however, infections, uterine perforation migra-

tion, IUD rupture and hemorrhage may occur, depending on the case. Uterine perforation was identified in 0.5 up to 13 per 1000 insertions (2, 3). As a consequence of uterine perforation, IUD migration in the abdominal pelvic cavity is possible and therefore, it is accompanied by vital risks such as fistula formation, bowel perforation, adhesions (4).

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Higher rates of complications are associated with insertion in the postpartum period, abnormal uterine cavity anatomy, breastfeeding status and physician's experience (5). Specialists should always take into consideration IUD migration when consulting a patient with a history of IUD insertion with complaints of lower abdominal pain and absence of IUD strings during speculum examination.

Thereby we present the case of an IUD that was inserted during the postpartum period that migrated into the rectal wall during the first year after insertion. □

CASE PRESENTATION

We present the case of a 31-year-old woman (para=4) with a medical history of a copper IUD insertion during her postpartum period in February 2018. In April 2019, the patient comes in for normal follow up consultation of the IUD. Speculum examination found no IUD strings and ultrasound showed no evidence of intrauterine IUD. According to the examination that took place in April, the patient was advised to use a different type of contraception for the moment and to have an abdominal pelvic radiography (Rx). Given that Rx identified the IUD in the pelvic region in a horizontal position, was scheduled for a surgical intervention to remove the migrated IUD. The time between the first consultation that showed the IUD migration and the date of the scheduled surgical intervention, the patient was hemodynamically stable and had normal laboratory values.

In July 2019, while awaiting for surgery, the patient presented to the Emergency Unit for abdominal pain EVA 4/10 for 10 days and secondary amenorrhea for 51 days, last menstrual period the 28th of May 2020. No digestive or urinary symptomatology and no vaginal bleeding were reported, blood pressure was 120/80 mm Hg, FC 75, and temperature 37°C. Pelvic ultrasound performed by endovaginal probe showed the presence of an intrauterine gestational sac, a yolk sac and an embryo with a crown-rump length of 3 mm that presented cardiac activity. No sign of fluids in the Douglas cul-de-sac was identified during the ultrasound exam and the laboratory results did not reveal any signs of inflammatory syndrome, anemia or other abnormalities.

The patient was informed about the available medical options as well as all advantages, disadvantages and complications of each option. After consulting with her family, she decided to continue with the pregnancy and to undergo surgical IUD removal after having given birth.

During her pregnancy, the woman was closely supervised, and all trimestral consultations showed a normal fetal evolution. The mother had no digestive or urinary symptomatology and no inflammatory syndrome. On March 2020, at 39 weeks and two days of gestational age, she gave birth vaginally to a healthy female infant, Apgar 9-10-10, weight 3510 g. The patient was discharged three days postpartum in good health condition, with no particularities, and a new date was scheduled for IUD surgical removal on the 11th of August 2020. The patient was stable hemodynamically, without any gastrointestinal symptoms or any other type of symptomatology and she informed the specialist about her desire to continue breastfeeding although she had to undergo a surgical treatment.

In August 2020, the patient was subjected to a laparoscopic intervention for IUD removal. A uterine manipulator was inserted for a better approach. For the laparoscopic intervention, a transumbilical 10 mm Trocar was inserted, followed by two other 5 mm trocars in the supra pubic region. Inspection of the pelvic cavity identified the IUD in the rectal anterior wall and its strings exiting from the anterior rectal wall were visible.

Rectal toucher failed to extract the IUD intra-operatively due to the high localization of the IUD.

A visceral surgeon was called into the operating room during the surgical intervention for medical advice. He recommended and approved incision of the anterior rectal wall, gently IUD removal and suture of the incision. Post-surgery antibioprohylaxis was performed.

The IUD was successfully and completely removed, with no fragments left behind. Suture of the rectal anterior wall was performed with three stitches. The integrity of the rectal wall was verified by distending the rectum with saline substance, with no leakage being observed. Abdominal cavity lavage was done in order to minimize any potential infection risks.

The patient was hospitalized overnight for specialized follow up and she was discharged the next day with a favorable health condition, hemo-

dynamically stable, no signs of fever, intestinal transit for gases, normal urinary frequency, no abdominal pain and continuation of antibiotherapy for five more days in order to have a seven-day-course of antibiotics. □

DISCUSSIONS

Uterine perforation is one of the main complications that may occur during IUD insertion; it may appear either primarily, during the insertion procedure, or secondarily, as a long term complication, uterine contractions developing a favorable environment for this type of complication. In 15% of cases, IUD migration takes place in different abdominopelvic organs such as bladder, small bowel, rectum or appendix (6, 7). Although it is not always possible to find an exact cause for IUD migration, there are certain underlying risk factors such as infections of the genital tract, congenital anomalies, a specific hypoestrogenism that may lead to thinning of the uterine wall in the first six months postpartum, history of abortion or a retroversion of the uterus (8, 9). Two types of IUD are commonly used for contraception: the copper-containing IUD and the levonorgestrel-releasing IUD. During pelvic ultrasound, only the copper-containing IUD can be seen, while the levonorgestrel-releasing one is invisible due to its barium-sulfate composition. On the other hand, both of them are visible on plain radiography and CT (9).

When having to deal with a pregnancy and history of IUD insertion, the first examination indicated is pelvic sonography. If the IUD is not visible during pelvic ultrasound, a plain abdominopelvic radiography is indicated, but only after having eliminated the possibility of a pregnancy (10).

Depending on the site of the intestine where the IUD migrated, there are different techniques for IUD extraction, ranging from colonoscopy to laparotomy, but due to particularities and rarity of these cases, the choice of technique is at the surgeons' discretion (11). Intra-abdominal laparoscopy is the privileged method, with a proven success rate of 44-100% (12, 13). □

CONCLUSION

Intrauterine device migration to abdominopelvic viscera is a rare but vital complication. When it occurs in association with a pregnancy, the management becomes a difficult choice for both surgeon and patient. Although IUD migration is most often accompanied by a specific symptomatology, in our case the patient had no symptomatology at all despite the strong IUD insertion into the anterior rectal wall. When dealing with particular cases like this one, it is strongly recommended to use a multidisciplinary team approach for discussing the management and choosing the best option for the patient. □

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