

Intrauterine Contraceptive Device Perforating the Cecum, a Pregnancy Complication?

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Abstract

Intrauterine contraceptive device (IUCD) is a widely used method of contraception worldwide. Displacement of the IUCD extrauterine, by perforating the uterus and migration, is a serious complication following its insertion. We reported an extremely rare case of a 24-year-old female patient found to have a copper T 380A IUCD displaced from its normal site to be embedded into the cecum, suggested to have occurred during pregnancy, and being successfully removed laparoscopically.

Keywords: Cecal perforation, intrauterine device, laparoscopy

INTRODUCTION

Intrauterine contraceptive device (IUCD) is an effective, long-acting, reversible method of contraception; it is very safe and well-tolerated. As such, it has become a favorable and popular way of family planning.^[1] Despite all these advantages of using IUCD over other methods, there are many complications. Some were associated with its presence and others with the procedure of insertion. Some examples of these complications are abdominal pain, pelvic inflammatory disease, expulsion, retraction into the cervix or uterus, and uterine perforation.^[2] IUCD perforates the uterus by two mechanisms, immediate traumatic or a later secondary cause, which may happen by erosion of myometrium.^[3] If perforation occurs, the IUCD may stay in the peritoneal cavity or migrate into intra-abdominal structures. There are some reported cases of a migrated IUCD in the ureter, urinary bladder, omentum, small intestine, appendix, and sigmoid colon.^[4,5] We herein report a case of a cecal perforation by a copper T 380A IUCD, which is suggested to have occurred during pregnancy, a case that was managed laparoscopically.

Article History:

Received 20 November 2018

Received in revised form 8 January 2019

Accepted 23 January 2019

Available online 29 April 2019

Access this article online

Quick Response Code:



Website:
www.e-gmit.com

DOI:
10.4103/GMIT.GMIT_109_18

CASE REPORT

This is the case report of a 24-year-old female patient, who is para three with a previous history of one cesarean section in her second delivery, after which she had a copper T 380A IUCD insertion in a family planning center, with no recorded complications. A follow-up abdominal sonography done after 1 month confirmed that the IUCD was inside the uterus in its correct position. Surprisingly, during her checkup for period irregularity 9 months later, another sonography was performed and showed the presence of a 7-week intrauterine gestational sac along with the IUCD inside the uterine cavity. The patient was offered removal of the IUCD, but she preferred to complete the pregnancy despite its presence. Her pregnancy went smoothly and without complications; the only mentioned symptom was an increased frequency of vomiting in the past 3 months in comparison with the previous two pregnancies. Knowing that the IUCD was difficult to be identified in the second half of her pregnancy, however, the IUCD was not retrieved at the time

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How to cite this article: Atileh LI, Mourad MA, Haj-Yasin D, Shlash L, Kaylani LZ, Fadila N. Intrauterine contraceptive device perforating the cecum, a pregnancy complication? *Gynecol Minim Invasive Ther* 2019;8:83-5.

of delivery. Accordingly, the patient was investigated to find the IUCD which was confirmed to be in the right iliac fossa outside the uterine cavity by a plain abdominal X-ray [Figure 1].

As long as the patient was asymptomatic, the plan was to do a laparoscopic surgery after complete uterine involution. The surgery was done as a classical laparoscopic procedure, with main entry through umbilicus, two ancillary ports on the left side and one on the right side for the assistant. Exploring the loop of bowel that was adherent to uterine fundus aided in finding the IUCD thread. Removal of adhesions between bowel and uterus was first done, after which pulling the thread of the IUCD resulted in retrieving the vertical arm, and showed that the horizontal arms were inside the cecum [Figure 2a]. The IUCD was pulled out, and primary closure of the cecum was achieved, using four interrupted stitches by vicryl 0–2 [Figure 2b].

The surgery went smooth, and the patient was discharged 2 days later without any complication.

DISCUSSION

The incidence of IUCD perforation is 0.4/1000.^[6] Complete perforation can result in migration of the IUCD to other intra-abdominal structures, such as the ureter, urinary bladder, omentum, small intestine, appendix, sigmoid colon, as well the cecum in this case.^[4,5] Literature shows few similar cases although with two major differences. First of which, the IUCD was penetrating the cecal wall associated with an inflamed appendix and was managed by appendectomy. Unlike this case, where the appendix was unharmed.^[7] In the other one, the IUCD was found to be on the surface of the cecum without perforation.^[8]

We claim that this is the first case in the literature suggesting that pregnancy is a risk factor for cecal perforation by a

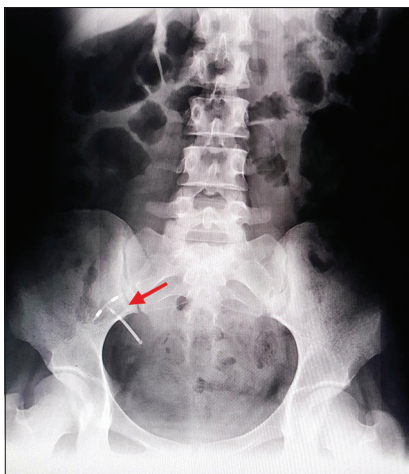


Figure 1: Anterior-posterior abdominal X-ray as the arrow shows the intrauterine contraceptive device in the right iliac fossa

migrated IUCD and to be managed laparoscopically at the same time. Risk factors for IUCD perforation include lack of experience by a clinician, type and size of the uterus, if the woman is lactating or not, and time of IUCD insertion after the delivery and pregnancy. Uterine perforation is usually asymptomatic, but abdominal pain, vaginal bleeding, and discharge may occur.^[9]

Ultrasonography is used to locate the IUCD; however, if the IUCD was not found inside the uterus, as in our case, an X-ray must be done. The X-ray revealed the IUCD to be placed in the right iliac fossa. A computerized tomography scan can also be done for further investigations.^[9] In asymptomatic patients, conservative treatment may result in migration of IUCD into more critical locations or even abscess formation; accordingly, in this case, surgical removal was preferred.^[5] Laparoscopy is suggested to be the first-line treatment in removal of a perforating IUCD, which was performed successfully in this case, despite the presence of adhesions and the rare position of the IUCD.^[10]

We suggest, in this case, that cecal perforation occurred during pregnancy by a migration process as the increased size of the uterus during pregnancy helped transport the IUCD to its final position at the level of the cecum, which is not an adjacent structure. We also suggest that the increase of intrauterine pressure during pregnancy participated in the migration process.

We do not know if removal of IUCD at early pregnancy will decrease the incidence of IUCD migration, especially into far anatomical locations.

CONCLUSION

Perforation of the IUCD could happen at the time of insertion, or it could migrate later under variable factors. Pregnancy may increase the risk of IUCD migration into structures that become adjacent to a gravid uterus. Laparoscopy is safe and should be a first-line treatment in case of migrated IUCD.

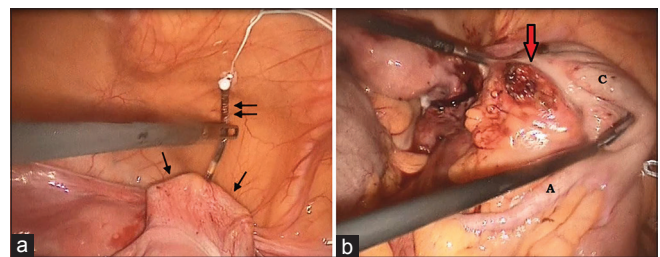


Figure 2: (a) Laparoscopic view showing horizontal arms of copper T 380A intrauterine contraceptive device embedded inside the cecum pointed by the single arrows, while the double arrow shows the vertical arm. (b) Laparoscopic view showing the site of perforation after removal of the intrauterine contraceptive device (arrow). As (A) represents the appendix, (C) represents the cecum

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given her consent for her images and other clinical information to be reported in the journal. The patient understands that name and initials will not be published and due efforts will be made to conceal identity, but anonymity cannot be guaranteed.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

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