

Appendiceal perforation caused by an intrauterine contraceptive device: A case report

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ARTICLE INFO

Keywords:

Perforation
Appendix
Intrauterine contraceptive device

ABSTRACT

Perforation of the appendix by an intrauterine contraceptive device occurs rarely. A 30-year-old woman presented to the emergency room complaining of severe abdominal pain and nausea 3 months after insertion of an intrauterine contraceptive device (Copper T). Ultrasound and radiological examination showed the device to be outside the uterus, in the right iliac fossa. Adhesions were found at laparoscopy between the appendix and the right adnexa. Appendectomy, removal of the intrauterine device, and right salpingo-oophorectomy were performed. She was discharged home without any complications. Histopathology revealed inflammation of the appendix. Uterine perforation should be considered in women with abdominal pain following insertion of an intrauterine device.

1. Introduction

Intrauterine contraceptive devices (IUCDs) provide safe, long-term, reversible contraception. Two types are used: non-hormonal copper-bearing, and hormonal, containing levonorgestrel. Complications of non-hormonal devices include expulsion, uterine perforation, ectopic pregnancy, problematic bleeding, and infection. One of the most serious, although very rare, side-effects of an IUCD is uterine perforation [1]. Appendiceal injury is extremely rare, with only a few cases reported in the English-language literature [1–5].

Management of uterine perforation is surgical removal of the device with laparoscopy or laparotomy [6,7].

2. Case Presentation

A 30-year-old woman, multipara, was referred to the emergency room with complaints of severe right-sided pelvic pain and nausea. An intrauterine contraceptive device (Copper T) had been inserted 3 months prior to the admission, and there was no significant medical or surgical history. Insertion had been undertaken by a physician in a rural outpatient clinic and the patient had felt slight pain and discomfort during the procedure.

On admission, vital signs and laboratory tests were normal, and her physical examination revealed guarding and rebound tenderness in the

lower right quadrant. A plain x-ray of the abdomen showed the IUCD to be in the right iliac fossa (Fig. 1). Ultrasonography revealed an empty uterus with an IUCD outside, surrounded by a hypoechoic structure (Fig. 2). At laparoscopy, the IUCD was found to have perforated the uterus and migrated to the appendix, causing adhesions of the appendix to the right adnexal region (Fig. 3). The IUCD was removed and an appendectomy was performed. In addition, right salpingo-oophorectomy was performed due to the adhesions. She was discharged home on the second postoperative day. Oral contraception was then prescribed. She had no complications at her two-month follow-up visit.

3. Discussion

IUCDs provide long-acting reversible contraception. They are a safe and effective contraceptive method, and fertility returns quickly after removal [8]. IUD migration to the bladder, appendix, stomach, or intestine has been recorded in some cases. Damage to neighboring viscera like the intestine, colon, or bladder may accompany perforation [9,10].

The risk of intrauterine perforation is up to 2 per 1000 insertions and is approximately six-fold higher in breast-feeding women [3,8,11]. The woman in this case report was not breast-feeding.

A plain x-ray of the abdomen is essential to confirm the presence of the IUCD in the pelvis. Once discovered, an ultrasound examination is

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<https://doi.org/10.1016/j.crwh.2022.e00447>

Received 14 August 2022; Received in revised form 31 August 2022; Accepted 1 September 2022

Available online 2 September 2022

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Fig. 1. A plain x-ray shows the IUCD in the right iliac fossa.



Fig. 2. Ultrasound shows an empty uterus with the IUCD in the pelvis.

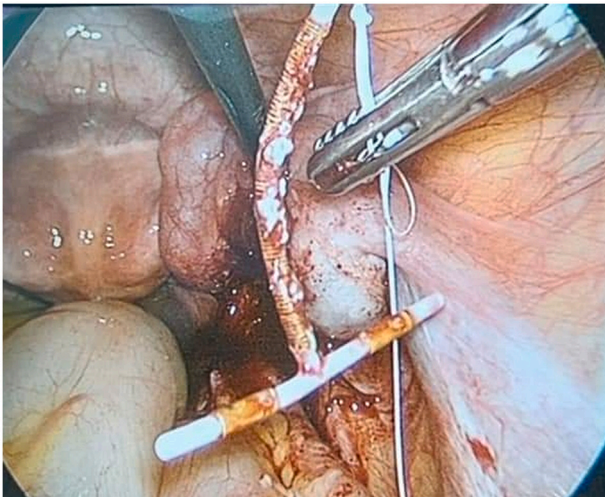


Fig. 3. Appearance of the IUCD after it was removed from the ovary and appendix.

required to determine the IUCD's position in relation to the uterus [1,12].

An x-ray in this case helped to identify the cause of the abdominal pain and the IUCD's location. Ultrasonography provided additional details about the formation around the IUCD and its relation to the right adnexa.

A migrated IUCD is treated surgically, through either laparoscopy or

laparotomy [1]. The advantages of laparoscopy include less trauma to the tissues, a shorter duration of the procedure, rapid postoperative recovery, and fewer adhesions [2]. In this case, the intrauterine device was removed and appendectomy was performed. Due to adhesions, right salpingo-oophorectomy was also undertaken, with no complications during the procedure or during the follow-up period.

4. Conclusion

Perforation of the appendix by an IUCD is very rare. Injury to structures adjacent to the uterus should be considered in cases of abdominal pain when there is a history of IUCD insertion.

Contributors

Gulan Maree contributed to acquisition and analysis of data as well as drafting of the case report.

Sozan Mohammad contributed to the data collection and management of this case, was involved in patient care, and contributed to acquisition and analysis of data as well as drafting of the case report.

Rama Saleh contributed to the data collection and management of this case, and was involved in patient care.

Alifa Hoshma contributed to the data collection and management of this case, and was involved in patient care.

Hawazen Makhluaf contributed to the data collection and management of this case, and was involved in patient care.

All authors approved the final article to be submitted.

Funding

No funding from an external source supported the publication of this case report.

Patient consent

Written informed consent was obtained from the patient for the publication of this case report.

Provenance and peer review

This article was not commissioned and was peer reviewed.

Conflict of interest statement

The authors declare that they have no conflict of interest regarding the publication of this case report.

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