International Journal of Reproduction, Contraception, Obstetrics and Gynecology
Dubey K et al. Int J Reprod Contracept Obstet Gynecol. 2024 Jun;13(6):1623-1625
www.ijrcog.org
pISSN 2320-1770 | eISSN 2320-1789

DOI: https://dx.doi.org/10.18203/2320-1770.ijrcog20241463

Case Report

Something left behind: a rare complication of copper-T insertion

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Received: 23 April 2024
Revised: 17 May 2024
Accepted: 20 May 2024

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ABSTRACT

This case report presents a unique and intriguing clinical scenario involving an incorrect copper T insertion following a caesarean section. The case presented the importance of training in the right technique for intra-uterine contraceptive device (IUCD) insertions in peripheral health facilities and the potential risks associated with inappropriate procedures. Prompt identification and management of misplaced IUCDs are crucial in minimizing patient discomfort, preventing complications, and optimizing reproductive health outcomes.

Keywords: Perforation, Impaction, Copper 380 mm^2 IUCD, Inserter tube

INTRODUCTION

Intrauterine contraceptive device (IUCD) is the second-most widely used contraception in the world due to its accessibility and affordability. In India, only approximately 3 in 100 women of reproductive age use IUCD, with copper devices being the most common. One of the main factors for discontinuation rates is the fear of complications such as pain, infection, excessive bleeding, uterine perforation, and spontaneous expulsion. Uterine perforation is one of the complications. Postpartum insertion, breastfeeding, insertion by a less skilled obstetrician-gynaecologist or another healthcare provider at peripheral centres, and significant anteflexion or retroflexion of the uterus are risk factors for perforation.[1] A perforated IUD may get adhered to the intestine or the omentum, free-floating in the pelvic cavity, or covered with adhesions due to an inflammatory response. The World Health Organisation recommends surgical removal as the most frequent form of treatment for uterine perforation. Health professionals must be aware of these complications, take the appropriate precautions while inserting Copper T, and be ready to provide early diagnosis and treatment if an IUCD goes missing to reduce the likelihood that the IUCD may migrate and cause bowel and bladder perforation. Here we present a 30-year-old female with a previous lower segment caesarean with missing copper T. In our case, the copper T was successfully removed under laparoscopic guidance.

CASE REPORT

A 30-year-old- female, P1L1 with a previous 1 lower segment caesarean section had a Copper 380 mm^2 IUCD insertion following a caesarean section 10 months back. She came to our facility with complaints of pain in the lower abdomen and irregular bleeding since delivery. She was pale (haemoglobin-7.6 gm/dl), vitals were stable, and the abdomen was soft, and non-tender. Copper 380 mm^2 IUCD threads were not visible on speculum examination and the uterus was enlarged (up to six to eight weeks period of gestation size) and tender per vaginal examination. On ultrasound, a misplaced IUCD was found penetrating through the scar site in the lower uterine segment and impinging on the posterior wall of the bladder with one arm located at the fundus (Figure 1A). CT scan confirmed the same finding and additionally, it showed a linear tract through the posterior bladder wall, extending

into the right obturator internus muscle across the right wall of the bladder. No extravasation of contrast was seen from the bladder. The left lower ureter was in close relation to the posterior uterine wall at the site of perforation and was likely getting compressed by the inflammatory tissue causing moderate hydroureteronephrosis (Figure 1B).

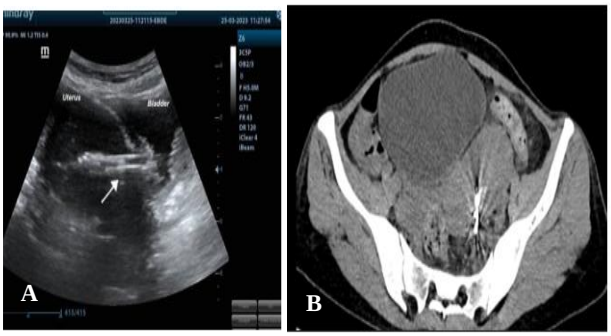

Figure 1: (A) Misplaced copper-T perforating through the scar site in the lower uterine segment and impinging on the posterior wall of the bladder. (B) CECT revealing misplaced copper-T with its upper tip perforating the anterior wall of the uterus.

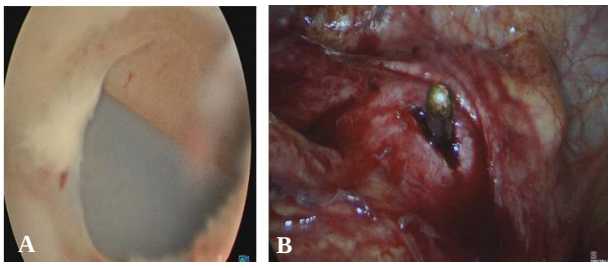

Figure 2: (A) Hysteroscopic image showing the IUCD. (B) On laparoscopy, T-shaped metal limb of copper-T visualized after tracing along the anterior uterine surface in the lower segment of uterus.

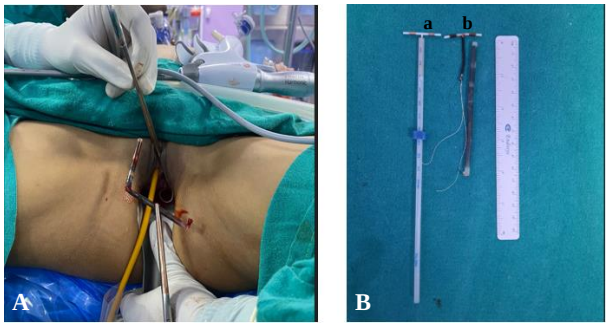

Figure 3: (A) Plastic inserter tube containing the Copper 380 mm^2 IUD removed per vaginally. (B) a - reference copper 380 mm^2 IUD, b - removed copper 380 mm^2 IUD along with the inserter tube (10 cm length) it was in.

The patient was taken up for hystero-laparoscopy. The device was deeply impacted inside the cavity however it looked thicker and seemed, unlike a Copper 380 mm^2 IUCD (Figure 2A). Hysteroscopic removal was tried and failed. On laparoscopy, there were dense omental adhesions on the anterior surface of the uterus and the bladder was pulled up. Adhesiolysis was done and the bladder was pushed down. The vertical metal limb of the Copper 380 mm^2 IUCD) was seen perforating through the fundal region in the anterior wall of the uterus (Figure 2B). A small knick was given on the anterior uterine wall over the impaction site, attempt to remove Copper 380 mm^2 IUCD laparoscopically failed. Copper 380 mm^2 IUCD pushed down in the uterine cavity. Using long straight artery forceps, we attempted to remove the Copper 380 mm^2 IUCD. On repeat hysteroscopy, we could see the Copper 380 mm^2 IUCD was inside its plastic inserter (10 cm length) (Figure 3A and B). Rent in the uterus closed using Vicryl no 1 suture. The patient was discharged on day 2 in stable condition.

DISCUSSION

Intrauterine contraceptive device (IUCD) is the second-most widely used contraceptive method worldwide. Unfortunately, in India, even though it is easily available in government facilities free of cost, it is still an unpopular and underutilized method with only a 2% contraceptive prevalence rate.

The main reason for this is the anxiety of complications such as pain and heavy bleeding along with apprehension associated with the possibility of uterine perforation. Even though rare, dismal stories associated with perforation disseminate widely and contribute to much of the unpopularity associated with intrauterine devices. Most perforations are likely to happen during IUCD placement and are asymptomatic and silent. These are discovered during a clinical visit the thread is not visible in the vagina or the woman is unable to feel the thread. Insertions by less skilled/untrained healthcare providers, significant anteflexion/retroflexion of the uterus, and genital infection are risk factors for perforation. A perforated IUCD may adhere to the intestine/omentum, remain free-floating in the pelvic cavity, or may be covered with adhesions due to an inflammatory response. Gupta et al reported a case of IUCD migration which was found densely adhered to the omentum and got impacted near the umbilicus.[2] In another unusual case reported by Sehgal et al of intravesical migration of Cu-T in a 33-year-old woman who complained of lower abdominal pain for the past 5 years and evaluated on the development of hematuria.[3] A case of translocation of copper-T into the stomach was reported by Rani et al when she complained of dull aching pain in the left upper quadrant with occasional radiation to the back for months.[4] The World Health Organisation (WHO) advises that any translocated IUCD following uterine perforation within the abdomen should be removed regardless of whether it is symptomatic or asymptomatic.[5] Health professionals must be aware of these complications, take the appropriate precautions during Copper T insertion, and be ready to allow early diagnosis and treatment if an IUCD goes missing to reduce the

likelihood that the IUCD may migrate and cause bladder and bowel perforation.

In this case, the patient presented with complaints of persistent abdominal pain and irregular menstrual bleeding for a prolonged period of 10 months after copper-T insertion. These symptoms were indicative of perforation or malposition of intrauterine devices. The subsequent ultrasound examination revealed a displaced copper-T with its tip located in the fundus of the uterus, penetrating through the lower uterine segment into the peritoneal cavity, and even further penetrating the posterior wall of the bladder. Such misplacements can result in a range of complications, including pain, abnormal bleeding patterns, and damage to surrounding organs.

In peripheral healthcare centres, where resources and training may be limited, there is a higher risk of procedural errors and inadequate follow-up. The inappropriate insertion of the Copper 380 mm^2 IUCD in our case happened at a secondary-level medical health facility. The health care professional was untrained in the correct technique of insertion as he placed the Copper 380 mm^2 IUCD along with a part of the inserter tube or was he experimenting? This highlights the importance of proper training, skills, and adherence to established guidelines when performing IUCD insertions. We initially thought it was a simple case of Copper 380 mm^2 IUCD perforated through the uterine scar. However, the CT finding took us by surprise as the tract of the IUCD was extended up-to the obturator internus muscle. However, we did not suspect that the inserter tube could have been placed with the Copper 380 mm^2 IUCD.

Healthcare practitioners should get comprehensive training on suitable insertion procedures to reduce the frequency of incorrect insertions. Emphasis should be placed on accurate positioning of copper-T within the uterine cavity and ensuring that the IUCD threads are visible and easily accessible for future removal. Regular assessments and quality assurance measures should be implemented to maintain the competency of healthcare providers in intrauterine device insertions.

Women should be well-informed about the potential risks, benefits and complications associated with intrauterine devices. They should be encouraged to report promptly in case of any unusual symptoms as our patient took 10 months to report to us even though she was symptomatic.

Informed written consent had been taken from the patient for publication purposes.

CONCLUSION

Finally, this instance emphasises the need to use adequate insertion procedures and maintain high levels of training and competency among healthcare personnel who do IUD insertions. To provide a happy contraceptive experience and reduce the risk of problems, patient-centred care, including extensive counselling and regular follow-up, is crucial. Healthcare practitioners may improve the safety and efficacy of intrauterine contraceptive techniques for women by addressing the issue of improper insertions and adopting correct techniques.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: Not required

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Cite this article as: Dubey K, Chawla L, Rajaram S, Kumari O, Bhandari J. Something Left Behind: A Rare Complication of copper-T Insertion. Int J Reprod Contracept Obstet Gynecol 2024;13:1623-5.