

Fimbrial Location of A Translocated Intrauterine Contraceptive Device Co-Existing with Pregnancy; A Case Report of an Uncommon Location of Intrauterine Contraceptive Device

Ige, Toluwalase Ebenezer¹; Awoleke, Jacob Olumuyiwa^{1,2}; Olatayo, Ayodeji Stephen¹,
Isola, Oladele Andrew¹; Okunola, Temitope Omoladun^{1,2}; Olofinbiyi, Rebecca Oluwafunke³;
Odetola, Amos Amoo¹; Sanya, Olusola Akinniyi¹; Olofinbiyi, Babatunde Ajayi^{1,2}

¹Department of Obstetrics and Gynaecology, Ekiti State University
Teaching Hospital Ado Ekiti, Ekiti State, Nigeria.

²Department of Obstetrics and Gynaecology, Faculty Clinical Sciences,
College of Medicine, Ekiti State University, Ado-Ekiti, Ekiti State, Nigeria.

³Department of Nursing Science, Faculty of Basic Medical Science,
College of Medicine, Ekiti State University, Ado-Ekiti, Ekiti State, Nigeria.

Abstract

Intrauterine contraceptive device, IUCD are reversible long-acting and effective methods of contraception which are widely used. Despite having an impeccable pearl index, they seldomly fail and when they do, are associated with some complications. This case presentation describes an uncommon location of a translocated IUCD into the fimbrial end of the fallopian tube as if was found in a 28-year-old primiparous who presented at an estimated gestational age of 12 weeks with a pelvic ultrasound scan which showed a live intrauterine gestation with an extrauterine IUCD, seen at the right adnexa. Pregnancy was allowed to continue and the IUCD was retrieved following an abdominal delivery at term. Despite the effectiveness of IUCD, complications can occur albeit rarely. They include expulsion, perforation and migration. IUCD migration is extremely uncommon, especially translocation into the fallopian tube, which according to Alyssa et al., only one of such case has been described in the literature which resulted in pyosalpinx. Personnel involved in providing family planning services should continuously undergo

training and re-training. Also, the role of follow-up reviews should not be downplayed and time-to-time self-examination of the IUCD string is important in order to detect a missing IUCD.

Keywords: Family planning, Fimbrially located IUCD, Intra-uterine Contraceptive Device (IUCD), IUCD migration, Long-acting contraception, Missing IUCD.

Introduction

Intrauterine contraceptive devices (IUCD), usually in the form of copper T intrauterine devices (CuT-IUD) or levonorgestrel intrauterine systems (LNG-IUS) are reversible, long-acting method of contraception¹. They are widely accepted, practical, safe and effective method of contraception and there are approximately 127 million users worldwide with developing nations employing their use at a rate of 14.5%, whereas industrialized nations use them at a rate of 7.9%². The CuT-IUD and LNG IUS have contraceptive effectiveness of 99.2% and 99.8% respectively¹. Despite possessing an

exemplary contraceptive pearl index, intrauterine pregnancy portends an uncommon but potential failure of the intrauterine contraceptive device³.

Missing or misplaced IUCD is one of the mishaps that can be experienced with the use of these devices. These may result in ectopic pregnancy, spontaneous abortion, or uterine perforation. The IUCD can also be expelled. The first year of insertion has the highest expulsion rates, particularly in the first three months. In Bida, Adewale et al. found that the prevalence of missing IUCD is 1.4%². Between 0.4 to 2.2 uterine perforations occur for every 1000 copper IUCD insertions.

Though they might happen later, most perforations happen when an IUCD is being inserted. These perforations frequently go undetected until follow-up examinations are conducted or they start to cause symptoms⁴. This is a case report of a failed IUCD with early live intrauterine pregnancy carried to term and an eventual abdominal delivery and retrieval of the fallopian tube - embedded Copper-T IUCD.

Case Report

A 28-year-old G2P1 + 0, 1A, now P2 + 0, 2A, who was referred from the general outpatient department of the hospital on account of early intra-uterine cyesis with extruded IUCD. She presented at an estimated gestational age of 12 weeks + 2 days with no complaints and examination findings at presentation were unremarkable. The patient presented with a pelvic ultrasound scan which showed a live intra-uterine gestation at 7 weeks gestational age with an extra-uterine IUCD seen at the right adnexal region. Her first confinement was a spontaneous vaginal delivery of a live male neonate on the 18th of June, 2021, and she subsequently had IUCD inserted in December, 2021. There was no history of difficulty with insertion and there were no

immediate complications noted. She was counselled on findings and management (including the need for abdominal delivery at term with IUCD retrieval) at presentation and was encouraged to book for antenatal care. She booked for antenatal care at estimated gestational age of 20 weeks, was seen every four weeks until 28 weeks, every two weeks until 36 weeks and weekly until delivery. The patient was booked for an elective Caesarean section and IUCD retrieval at 38 weeks gestational age.

At surgery, the uterus was found to be dextro-rotated with a well-formed lower uterine segment and a live male neonate with an APGAR score of 8¹, 9⁵ and birth weight of 2.9kg was delivered cephalad. The IUCD was seen, embedded within the right fimbria end of the fallopian tube with its string seen projecting into the peritoneal cavity. The left fallopian tube and both ovaries appeared grossly normal. The appendix was inflamed and measured about 10cm in length.



Blue arrow – IUCD string, Green arrow – Fallopian tube

She had Caesarean section, retrieval of the IUCD and appendectomy done. Had a good recovery and was subsequently counselled on options of contraception.

Discussion

Intrauterine contraceptive devices (IUCDs) are a highly effective form of long-acting reversible contraception widely used worldwide. They offer advantages such as high efficacy, reversible contraception, and long-term duration of action^{1,2}. However, despite their effectiveness, complications can occur, including expulsion, perforation, and migration. Following uterine perforation, the device can also migrate to the omentum, rectum, sigmoid colon, appendix, small bowel and urinary bladder. These are often associated with mal-positioning of the IUCD during insertion⁵. The case presented here highlights the uncommon yet significant implication of a missing IUCD.

IUCD expulsion rates vary widely in the literature, with reported rates ranging from 2% to 10% with interval non-postpartum insertions and expulsion often occurs within the first year after insertion. IUCD migration or perforation, although less common, can have serious implications. According to the majority of researches, perforations occur between 0.3 and 2.6 per 1000 IUCD insertions⁶. Perforation can lead to complications such as pelvic inflammatory disease, intra-abdominal adhesions, or even organ damage⁷. According to Alyssa et al., It is unclear how IUCD migration occurs, particularly tubal migration, which is extremely uncommon and has not received much attention in the literature. Only one tubal migration instance involving a copper

containing IUCD that resulted in pyosalpinx has been documented in the literature out of the few cases that have been studied and this is the only case where-in an embedded IUCD in the fallopian tube was described⁸.

Patients who have an IUCD in-situ are generally less likely to get pregnant than those who do not, but in the event that they do, the pregnancy is more likely to be an ectopic pregnancy. Pregnancy rates range from 0.2 to 0.8% when IUCDs are utilized⁶. The absence of symptoms in our patient underscores the importance of vigilance in monitoring IUCD placement. Regular follow-up appointments, including ultrasound imaging when indicated, are crucial for detecting potential complications early. In our case, the occurrence of pregnancy prompted request for a pelvic ultrasound scan, ultimately leading to its discovery in the right adnexa. Imaging techniques like ultrasonography and X-rays can be used in making a diagnosis and locating a migrating/missing IUCDs⁹.

It is controversial whether or not an asymptomatic migrating IUCD should be removed. Several authors have advocated surgical removal of the copper IUCD in asymptomatic patients in order to prevent the formation of adhesions, which can cause abdominal pain, intestinal obstruction and infertility¹⁰. When intraperitoneal migration is established, laparoscopy continues to be the most dependable diagnostic and therapeutic method. The World Health Organization recommends surgical retrieval, even in asymptomatic individuals. Most of the time, minimally invasive treatments including colonoscopies, hysteroscopies, and laparoscopies are best employed; nevertheless, if the lost IUCD is buried in organs or adjacent to large blood vessels, invasive interventions with an experienced surgeon may become necessary^{9,10}. In our patient's case, retrieval was delayed till

delivery because laparoscopy is yet to gain ground, being a low resource setting.

It is essential for healthcare providers to counsel patients about the possibility of IUCD complications, including expulsion, migration, and perforation. They should be educated about the signs and symptoms to expect whenever any of these complications occur and they are encouraged to seek medical attention promptly. Additionally, healthcare providers should maintain a high index of suspicion for IUCD complications, especially in cases where the device cannot be visualized on ultrasound.

Conclusion

While missing IUCDs are rare, they can have significant implications for the health of patients and require prompt evaluation and management. This case underscores the importance of meticulous assessment and follow-up in patients using IUCDs for contraception.

References

1. Verstraeten V, Vossaert K, Van den Bosch T. Migration of intra-uterine devices. *Open Access J Contracept*. 2024;41–7.
2. Adebayo AA, Olumide AT, Akujuobi OR, Oluseyi AI, Adewumi B, Olabisi AT. Misplaced (' "Missing"') Intrauterine Contraceptive Device Among Clients at a Rural Tertiary Hospital in South Western Nigeria. *J Gynecol Obstet*. 2019;7(2):51–5.
3. Rana A, Shrestha A, Regmi A, Aryal S, Karki P. Intrauterine pregnancy with copper intrauterine contraceptive device in situ: A case report from Nepal. *Ann Med Surg*. 2022;82.
4. Zare S, Sohrabi R, Sohrabi H. Pregnancy with intrauterine device perforation: a case report. *Int J Fertil Steril*. 2024;18(1):91.
5. Isikhuemen ME, Idolor AG, Uwagboe CU, Sodje JDK, Anya CJ, Okonofua FE. Case report of an unusual finding of intrauterine contraceptive device in the rectum. *Int J Surg Case Rep*. 2024;109436.
6. Myo MG, Nguyen BT. Intrauterine Device Complications and Their Management. *Curr Obstet Gynecol Rep*. 2023 Jun 1;12(2):88–95.
7. Zacharias A, Clark S, Parmar C, Oshowo A. Intestinal Perforation by a Migrated Intrauterine Contraceptive Device: A Review of This Rare but Important Complication. *SN Compr Clin Med*. 2021 Aug 1;3(8):1759–67.
8. Goldbach AR, Hava S, Patel H, Khan M. IUD embedment in the fallopian tube: An unexpected location for a translocated IUD. *Radiol Case Rep*. 2018 Jun 7;13(4):788–92.
9. Gebremichael A, Teka H, Abadi KK, Siferih M, Moges M, Arusi M, et al. Missed Diagnosis of Perforation and Intraperitoneal Migration of an Intrauterine Device and Its Management in a Resource-Limited Setting: A Case Report. *Int Med Case Rep J* [Internet]. 2024 Dec 31 [cited 2024 Apr 15]; Available from: <https://www.tandfonline.com/doi/abs/10.2147/IMCRJ.S441386>
10. Isidore T, Rakya I, Robert T, Humphry N, Georges M, Charlotte T, et al. Successful Laparoscopic Management of a Migrated Intrauterine Contraceptive Device in the Pelvic Cavity: A Case Report. *Open J Obstet Gynecol*. 2024 Jan 9;14(1):36–43.