

An Unusual Presentation of a Migrated Intrauterine Contraceptive Device (IUCD) in the Rectosigmoid Colon

Wuen Lynn, Toh; Whui Whui, Lim; Wei Keat, Andy Tan.
Department of Obstetrics and Gynaecology, Singapore General Hospital, SingHealth, Singapore.



Summary

Migration of an inserted intra-uterine contraceptive device (IUCD) is rare, with literature reporting uterine perforation rates ranging from 0.4 to 2.6 per 1000 insertions.¹ The most common reported site of visceral involvement after a uterine perforation from an IUCD is the omentum, followed by the bladder. Migration of IUCD into the rectosigmoid is less commonly reported.² In a review of 356 cases of translocated IUCDs over 15 years, 20 cases of intestinal perforation were reported, of which nine involved the rectosigmoid.²

Here, we present an unusual case of a 33-year-old lady who presented 5 years after having had an IUCD inserted, with right flank pain and urinary symptoms. Subsequent imaging revealed a migrated IUCD abutting into the rectosigmoid junction. She subsequently underwent a diagnostic hysteroscopy, flexible sigmoidoscopy, diagnostic laparoscopy, removal of the impacted IUCD and repair of rectum.

History

A 33-year-old parity 1 lady presented to the Emergency department with a 3 day history of right loin to groin pain associated with low grade temperature and dysuria. On examination, she was tender over the right hypochondrium and right flank with no signs of peritonism, and her right renal punch was positive. An X-ray KUB done in the emergency department showed no renal stones and an intrauterine device noted within the midline of the pelvis (Figure 1). Her investigations demonstrated a raised total white cell of $11.3 \times 10^9/L$ and she was subsequently commenced on intravenous antibiotics and analgesia for treatment of pyelonephritis. A subsequent CT KUB performed reported “a migrated intrauterine device located between the body of the uterus and adjacent rectosigmoid colon. Small pockets of gas are present surrounding it. No surrounding fluid collection. No calculus in the urinary tract.” (Figure 2). MRI pelvis subsequently confirmed a migrated IUCD posterior to the uterine body with both ends closely abutting onto adjacent proximal rectum (Figure 3).

On further history, patient reported having had a copper intrauterine device inserted 5 years ago postnatally after an emergency caesarean section for failure to progress. During her 4 weeks postnatal visit, she had a PAP smear done which showed normal endocervical cells with no malignancy, and her copper IUCD was inserted in the same setting. The patient was planned to be followed up in 2 months. However, she defaulted her clinic appointment and was lost to follow up. 2 years later, the patient was residing overseas and presented to the doctors there with a complaint of amenorrhea. During those consults, she was informed of the migrated IUCD and underwent a diagnostic laparoscopy. Post diagnostic laparoscopy, she was told by the surgeon that due to the location of the IUCD, there was a high risk of bowel perforation if removal was attempted and hence the decision was made to leave the IUCD in situ. After discussion, the patient chose a conservative approach and opted to leave the IUCD in situ. She was advised to seek medical attention if she had any abdominal pain and remained well until her presentation to our institution.

When she presented to us, due to the involvement of the bowels, a multidisciplinary approach was chosen and the management of the patient was done in collaboration with the colorectal surgeons. In view of the persistent abdominal pain and known findings of a migrated IUCD, the patient opted for surgical management. Pre-operatively, she underwent a flexible sigmoidoscopy which demonstrated an erosion of the distal tip of the IUCD into the rectosigmoid junction. The IUCD was intact with the wire present, approximately 18cm from the anal verge on the patient’s right anterolateral region as shown in figure 4. She was then prepped for an operation to remove the IUCD. Intra-operatively, her hysteroscopy noted a normal size uterus with an intact cavity with no IUCD seen inside. She then underwent another flexible sigmoidoscopy which demonstrated an erosion of the distal tip of the IUCD into the rectosigmoid junction. Gentle traction to attempt removal of the IUCD failed and hence a diagnostic laparoscopy was performed to remove the impacted IUCD intra-abdominally with a repair of the defect in the rectum. Laparoscopically, the “T” of IUCD was noted to be embedded external to the recto-sigmoid junction with surrounding chronic inflammation. The uterus was otherwise completely clear of the rectum with no fistula noted. A partial rectotomy was done to remove the embedded IUCD and the defect closed in 2 layers with vicryl 3-0 sutures. The patient recovered well postoperatively and was discharged 2 days later. She continues to be followed up in both the colorectal and gynecology clinics.

Discussion

A review of literature noted that the risk of uterine perforation is increased in a retroverted uterus, insertion done during early postpartum state or if the patient was breastfeeding at the time of insertion.^{1,3,4} Andersson et al suggested that estrogen levels are low during lactation which results in a small uterus, thus increasing the risk of uterine perforation.¹ Increased pain threshold from increased beta-endorphins in lactating women have also been suggested for the cause of unnoticed uterine perforation during IUCD insertion in a lactating woman.⁵ Some authors suggests postponing IUCD insertion to 6 months postpartum, rather than 3 months with the risk of pregnancy, but this will require further studies prior to being part of routine recommendations.^{5,6,7}

Migration or translocation of the IUCD into adjacent organs can have serious consequences. When an IUCD is noted to have migrated, an exploratory laparoscopy (if suitable) or laparotomy is often the first line of intervention.⁸ This is typically recommended due to the potential sequelae of a migrated IUCD. However, there are some authors who have suggested that a non-operative management could be an option for asymptomatic patients because of the morbidity associated with surgery and anaesthesia.⁹ This remains debatable and further research needs to be done before formal recommendations can be proposed.

Due to the involvement of multiple organs, it is prudent to involve other specialists for a multidisciplinary approach in the care of such cases. Management should be based on a combination of the radiological findings, endoscopic findings and knowledge of the anatomy of the abdominal organs. As such, the input of several specialists are warranted for optimal care of the patient.

In addition, the method of IUCD retrieval depends on the location of the migrated IUCD. There have been reports of alternative retrieval methods of partially embedded IUCD in the sigmoid colon or rectum. In a review by Assarian and Raja, they reported four cases in the literature whereby the migrated IUCD in the rectosigmoid region were removed by manual traction, five cases with the help of a proctoscope, three other cases with the help of rigid sigmoidoscopy, and one case in which a colonoscope was used and the migrated device removed with a snare.¹⁰ They also suggested colonoscopic or transrectal retrieval as a potential feasible method for retrieval and routine preoperative endoscopic evaluation done for similar cases to avoid unnecessary surgical intervention.¹⁰ In our patient, she underwent a preoperative endoscopic evaluation of the migrated IUCD. However, in conjunction with the imaging and endoscopic findings, the IUCD was deemed to be too deeply impacted and thus no endoscopic retrieval was attempted preoperatively. Subsequently, she underwent a surgery and an endoscopic retrieval was attempted intraoperatively under general anesthesia. This however, was unsuccessful. Our patient eventually had a diagnostic laparoscopy with partial rectotomy to remove the embedded IUCD and the defect closed in 2 layers with vicryl 3-0 sutures. As such, endoscopic retrieval should be attempted only on a case-by-case basis.

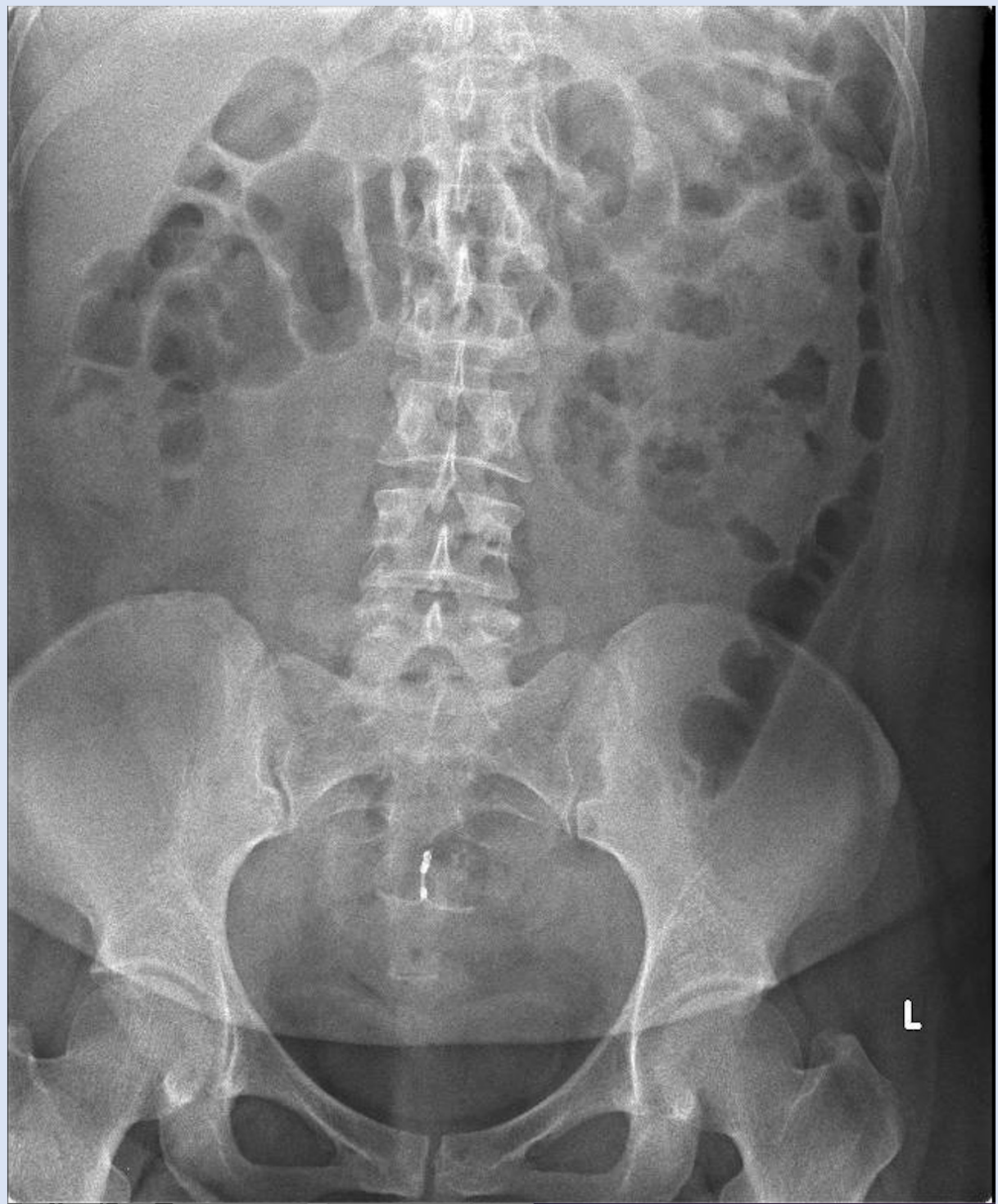


Figure 1: X-ray KUB showing no renal stones and an intrauterine device noted within the midline of the pelvis



Figure 2: CT KUB transverse view showing the Intrauterine device has migrated and is now located between the body of the uterus and adjacent rectosigmoid colon.



Figure 3 shows sagittal view of the migrated IUCD posterior to the uterine body, with its ends closely abutting onto adjacent proximal rectum

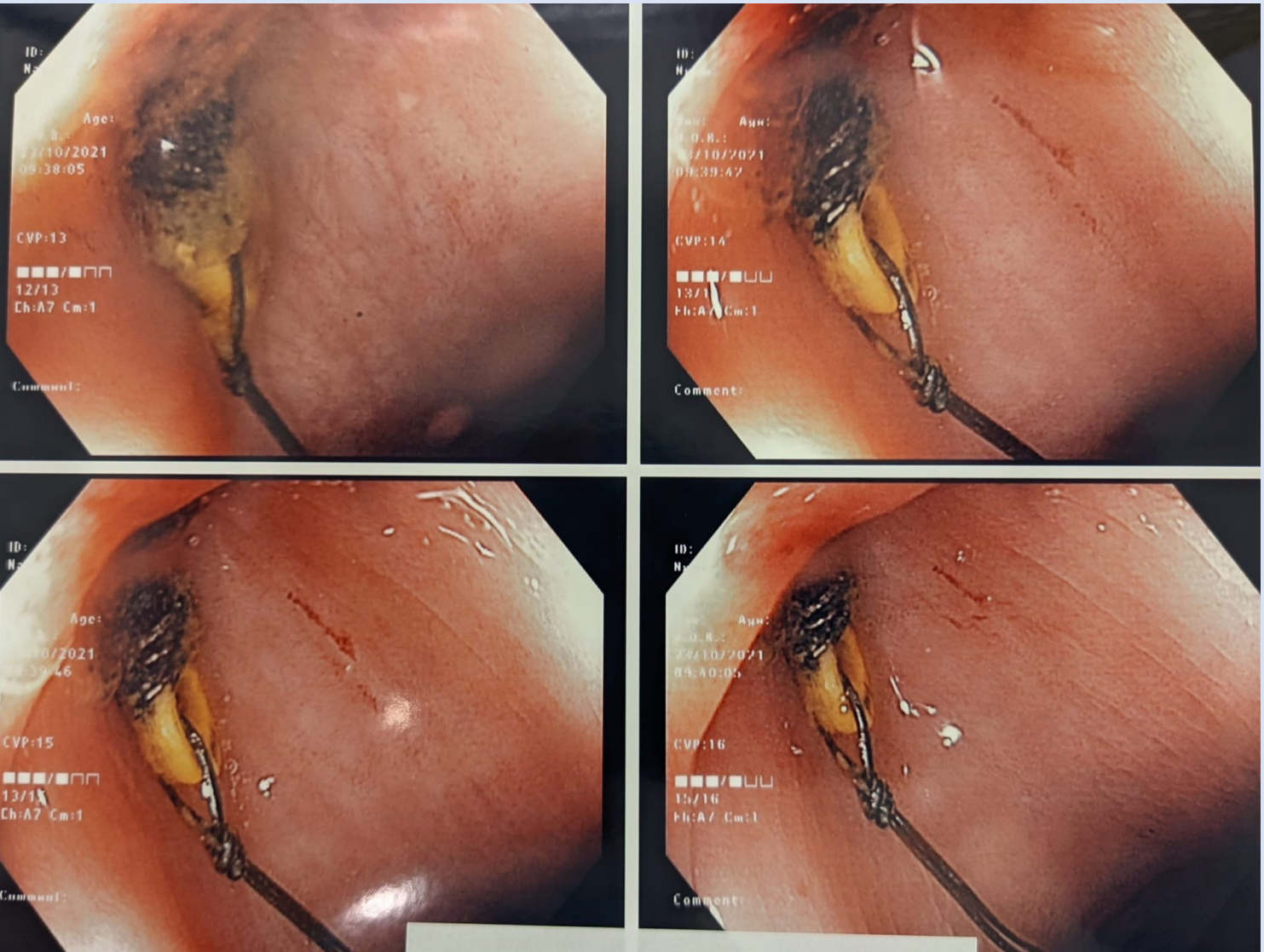


Figure 4 shows the flexible sigmoidoscopy view of the migrated IUCD



Figure 5 shows the removed IUCD..

Takeaway Points

- Clinicians should be aware that the risk of uterine perforation with IUCD is increased in a retroverted uterus, insertion during early postpartum state or in lactating women
- There should be a detailed examination and workup of patients with missing IUCD threads and non-specific symptoms.
- Migration or translocation of the IUCD into adjacent organs can have serious consequences
- When an IUCD is noted to have migrated, an exploratory laparoscopy (if suitable) or laparotomy is often the first line of intervention. However, endoscopic or less invasive methods of removal of the migrated IUCD can be considered if deemed appropriate
- A multidisciplinary approach is recommended for the management of such cases
- More studies can be done to determine the appropriate duration postnatally to reduce the risk of migration or perforation of the uterus with IUCD insertion
- More studies can be done to explore the non-surgical management of a migrated IUCD to provide a less invasive approach to such cases

Conclusion

Looking forward, this case presents many points for discussion regarding the management of a migrated IUCD. More studies need to be done prior to routine recommendations. Albeit a rare complication arising from IUCD insertion, this case highlights the need for clinicians to be aware of the potential complications arising from IUCD insertion and its subsequent management.

References

1. Andersson K, Ryde-Blomqvist E, Lindell K, Odling V, Milsom I. Perforations with intrauterine devices. Contraception. 1998;57(4):251-255
2. Committee Opinion No 672: Clinical Challenges of Long-Acting Reversible Contraceptive Methods. Obstetrics & Gynecology. 2016;128(3):e69-e77. Zakin D, Stern W, Rosenblatt R. Complete and Partial Uterine Perforation and Embedding following Insertion of Intrauterine Devices. I. Classification, Complications, Mechanism, Incidence, and Missing String. Obstetrical & Gynecological Survey. 1981;36(7):335
3. Prabhu J, Rani R, Nayak N, Natarajan P. Migration of intrauterine contraceptive device into sigmoid colon. Journal of Obstetrics and Gynaecology. 2010;30(5):526-527.
4. Neeboz Ü, Özçakir H, Uyar Y, Çağlar H. Migration of an intrauterine contraceptive device to the sigmoid colon: a case report. The European Journal of Contraception & Reproductive Health Care. 2003;8(4):229-232.
5. Kiilholma P, Mäkinen J, Mäenpää J. Perforation of the uterus following IUD insertion in the puerperium. Advances in Contraception. 1990;6(1):57-61
6. Macfarlan S. Perforation of the postpartum uterus with an intrauterine contraceptive device. American Journal of Obstetrics and Gynecology. 1966;94(2):283.
7. Heartwell S, Schlesselman S: Risk of uterine perforation among users of intrauterine devices. Obstet Gynecol 61:31, 1983. Journal of Nurse-Midwifery. 1983;28(3):35-36 .
8. Intrauterine Contraception. Faculty of Sexual & Reproductive Healthcare (FSRH); 2019.
9. Markovitch O, Klein Z, Gidoni Y, Holzinger M, Beyth Y. Extrauterine mislocated IUD: is surgical removal mandatory?. Contraception. 2002;66(2):105-108.
10. Assarian A, Raja M. Colonoscopic retrieval of a lost intrauterine contraceptive device: A case report and review of articles. The European Journal of Contraception & Reproductive Health Care. 2005;10(4):261-265.