

Endoscopic Removal of Migrated Intrauterine Device: A Case Report and Literature Review

M.Kadiri^{1*}, M.Salihoun¹, N.Lrhorfi², M. Acharki¹, N. Kabbaj¹

¹Department of Gastroenterology "EFD-HGE", Ibn Sina University Hospital Rabat, Morocco

²Radiology Department, Ibn Sina University Hospital, Rabat, Morocco

DOI: [10.36348/sjpm.2021.v06i05.002](https://doi.org/10.36348/sjpm.2021.v06i05.002)

| Received: 24.03.2021 | Accepted: 01.05.2021 | Published: 08.05.2021

*Corresponding author: M.Kadiri

Abstract

The intra-uterine device (IUD) is the most common existing reversible contraception. Colonic perforation is an infrequent but serious complication of IUD. We report a case of a 32 years old woman with a history of IUD inserted at early puerperal period, who presented in consultation for a surprising reason: the perception of wires from the anus without any specific symptoms. Radiological assessment revealed that the IUD migrated partially into the lumen of the rectosigmoid. Intrauterine device embedded in sigmoid colon wall was successfully been removed endoscopically using a polypectomy snare with the placing of a hemostatic clip.

Key words: Endoscopic resection, Intrauterine devices, migration, Sigmoid.

Copyright © 2021 The Author(s): This is an open-access article distributed under the terms of the Creative Commons Attribution 4.0 International License (CC BY-NC 4.0) which permits unrestricted use, distribution, and reproduction in any medium for non-commercial use provided the original author and source are credited.

INTRODUCTION

The intrauterine device (IUD) is a form of contraception with a long duration of action and few systemic side effects, but it can cause significant morbidity following migration into adjacent organs. Involvement of small and large bowel is known to cause obstruction, perforation, ischemia, mesenteric injury, strictures and fistulae. Pregnancy following IUD migration leads to difficulty in localization and removal of the device. We present a case of successful endoscopic removal of a migrated IUD.

CASE PRESENTATION

A 32 years old multiparous woman, with a history of a copper-T 380A IUD insertion at the sixth week of her puerperal period. Her first check-up revealed no abnormalities.

2 years later, the patient got pregnant while using the IUD. During routine control in the family

planning center, IUD was not visualized and was thought to be expelled with the postpartum bleeding.

3 years on, the patient consults for the perception of wires from the anus; she denied abdominal pain, change in bowel habits, and bright red blood per rectum, melena, and decrease caliber of stool, vaginal bleeding, vaginal discharge, dyspareunia, dysuria, or hematuria.

The clinical examination finds a patient in good general condition; she had moderate abdominal distention with generalized mild tenderness during palpation. Abdominal roentgenogram showed the copper-T device in the abdominal cavity or the colon. The exam was completed by a pelvic-abdominal computerized tomography scan that confirmed the localisation of the IUD in the sigmoid colonic lumen (Figure 1).

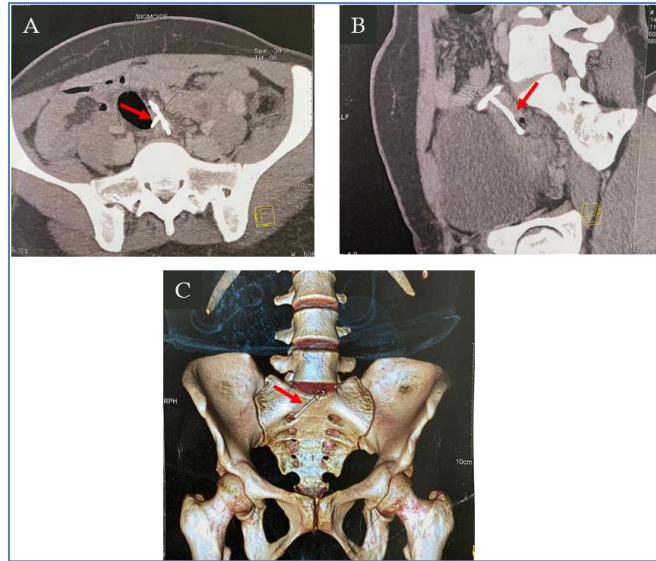


Fig-1: Axial (A) and sagittal (B) contrast enhanced CT scan of pelvis with 3D reconstruction. (C): The IUD stems forming a fistula in the sigmoid colon (arrow). The protruding arms are embedded in fibrous tissue in mesosigmoid fat.

The IUD stems forming a fistula in the sigmoid colon (arrow). The protruding arms are embedded in fibrous tissue in mesosigmoid fat.

A colonoscopy was performed, and shows that one of the two arms and the body of the copper-T device were seen in the lumen, but the other arm was firmly embedded into the wall of sigmoid colon(Figure 2 «A») the decision to retrieve the device endoscopically was taken as it patient was

asymptomatic and adjacent organ involvement was absent.

The IUD was successfully extracted using a polypectomy snare without any bleeding or perforation (Figure 2 «B-C»).

An hemostatic clip was placed preemptively. The recto sigmoid area was inspected and no bleeding found (Figure 3) the patient had a favorable clinical evolution.

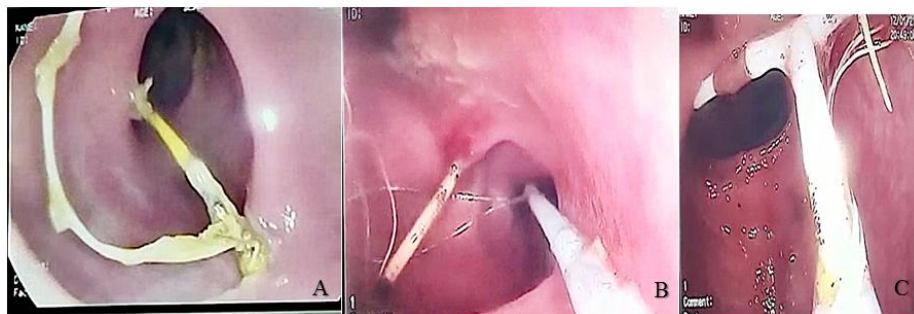


Fig-2: A-Colonoscopy view of the copper-T device partially penetrated to sigmoid colonic wall B- IUD successfully removed by using a polypectomy snare C- colonoscopy showing the entire IUD during removal

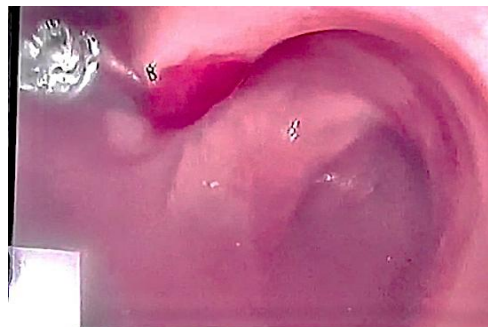


Fig-3: After IUD removal, this site was clipped by an hemostatic clip

DISCUSSION

Intrauterine device is a widely used reversible method of contraception, preferred due to long duration of birth control effect and ease of use. However it also has some serious complications such as perforation of the uterus and its migration to the abdominopelvic structures [1].

Although rare, our literature review found seventy-seven casereports in the international literature, with the most remote report of a Gräfenberg ring migration dating back to 1933. The most commonly reported organ to be involved are the rectum [2-4], comprising 21 of 77 case reports, and the sigmoid colon [5-6], and comprising 20 of the 77 case reports. However, reports of migration to the ileum [7], jejunum [8], appendix [9], urinary bladder [10], ovary [11] and small bowel mesentery [12] were also found.

A possible mechanism for the colonic penetration is adherence of the copper IUD to the pericolonic fat, followed by local inflammation and eventual penetration into the sigmoid colon. Another less likely mechanism is uterine enlargement during the patient's pregnancy, physically displacing the IUD into the sigmoid colon. However, there is no past literature associating pregnancy as a risk factor for extrauterine IUD organ penetration.

When a bowel perforation occurs a triad of abdominal pain, fever, and intermittent diarrhea have been described. However, in some patients an extrauterine IUD is an incidental finding with no obvious symptoms [6] which was the case in this patient. Complications of an extrauterine IUD include embedment within the bowel wall with a potential risk of bowel perforation, appendicitis [13], small bowel obstruction [14,15] and two cases where an IUD caused a colocolic fistula [16,17] were also found.

Ultrasonography and plain X-ray are diagnostic for echogenic and radio opaque foreign body, respectively. The computed tomography scan is a helpful imaging technique as in our case for confirmation of the localization of IUD.

World Health Organization recommended removal of a dislocated IUD as soon as possible irrespective of their type and location [18]. It is advised to retrieve a migrated IUD by minimally invasive techniques [19]. Endoscopic techniques such as colonoscopy, hysteroscopy, and cystoscopy can be used for diagnosis and treatment depending on the location of IUD. There are several case reports in the literature about removing an IUD in colonic lumen with colonoscopy. However retrieval of an IUD with colonoscopy when IUD is embedded in the colonic wall and surrounded with granulation tissue, as in our case, is inappropriate. This intervention would be traumatic and may cause colonic defect with intraabdominal

leakage of colonic content [20]. In our case, the removal of the foreign body endoscopically was successful without any incident.

When rectal perforation occurs, IUD retrieval through the rectal route is fairly common (8 cases/11) [21]. This procedure appears to be safe because no complications have been described, but it is only possible if the IUD is free in the lumen or partly embedded. The technique for removing a translocated IUD depends on its location, the extent of adhesions and the experience of the operator.

CONCLUSION

IUD migration is a rare but severe complication of this form of contraception. Treatment usually requires surgery, but can be avoided if the IUD is partly embedded in the colon wall, with retrieval during rectosigmoidoscopy. Careful evaluation of the patient, involvement of the multidisciplinary team, identification of the exact location of the IUD and associated organ involvement is imperative to the proper management of this complication.

This case highlights the possible growing role of endoscopic treatment of foreign body associated colonic perforations.

REFERENCES

1. Weerasekera, A., Wijesinghe, P., & Nugaduwa, N. (2014). Sigmoid colocolic fistula caused by intrauterine device migration: a case report. *Journal of medical case reports*, 8(1), 1-4.
2. Ye, H., Huang, S., Zhou, Q., Yu, J., Xi, C., Cao, L., ... & Gong, Z. (2018). Migration of a foreign body to the rectum: a case report and literature review. *Medicine*, 97(28).
3. Shah, K., Molmenti, E. P., Coppa, G. F., Procaccino, J. A., & Angel, L. P. (2010). Rare Presentation of an Intrauterine Device Migration into the Rectum. *The American Surgeon*, 76(12), 243-244.
4. Al Sahaf, M. A., Bseiso, B. F., Al-Momen, S. A., & Meshikhes, A. W. N. (2019). Endoscopic removal of an incidentally discovered intrauterine contraceptive device eroding into the rectum. *BMJ Case Reports CP*, 12(9), e231410.
5. Ali, N., & Zarin, M. (2018). Retrieval of Misplaced Intrauterine Device from Sigmoid. *Journal of the College of Physicians and Surgeons--pakistan: JCPSP*, 28(9), 717-718.
6. Sentilhes, L., Lefebvre-Lacoeuille, C., Poilblanc, M., & Descamps, P. (2008). Incidental finding of an intrauterine device in the sigmoid colon. *The European Journal of Contraception & Reproductive Health Care*, 13(2), 212-214.
7. Torres-Cepeda, D., & Reyna-Villasmil, E. (2016). Small bowel perforation by an intrauterine

- device. *Gastroenterologia y hepatologia*, 39(7), 495-496.
8. Velasco, J. R. V., Nava, P. V., Bernal, R. A. N., & Ambe, A. K. (2006). Uterine and jejunum perforation due to intrauterine device. A report of a case and literature review. *Ginecologia y obstetricia de Mexico*, 74(08), 435-438.
 9. Kuś, E., Świerczewski, A., Pasiński, J., Estemberg, D., Brzozowska, M., Kowalska-Koprek, U., ... & Karowicz-Bilińska, A. (2012). Intrauterine contraceptive device in an appendix—a case report. *Ginekologia polska*, 83(2).
 10. Sepulveda, W. H., Ciuffardi, I., Olivari, A., & Gallegos, O. (1993). Sonographic diagnosis of bladder perforation by an intrauterine device. A case report. *The Journal of reproductive medicine*, 38(11), 911-913.
 11. Verma, U., & Verma, N. (2009). Ovarian embedding of a transmigrated intrauterine device: a case report and literature review. *Archives of gynecology and obstetrics*, 280(2), 275-278.
 12. Singer, T., Nizam, A., Shay, A., Andrews, R., & Divon, M. Y. (2015). Single-Site Laparoscopy for Management of Perforated Intrauterine Device With Small Bowel Mesentery Implantation. *Journal of minimally invasive gynecology*, 22(6), S214.
 13. Serra, I. (1986). Appendicitis caused by an intrauterine contraceptive device. *The British journal of surgery*, 73(11), 927-928.
 14. Jones, D. (2014). Young woman with abdominal pain. *Annals of emergency medicine*, 64(4), 423.
 15. De Villiers, E. H. G., & Rosenstein, P. F. (1966). Intestinal obstruction following perforation of the uterus with an intrauterine contraceptive device. *American Journal of Obstetrics & Gynecology*, 96(4), 592-593.
 16. Weerasekera, A., Wijesinghe, P., & Nugaduwa, N. (2014). Sigmoid colocolic fistula caused by intrauterine device migration: a case report. *Journal of medical case reports*, 8(1), 1-4.
 17. Pirwany, I. R., & Boddy, K. (1997). Colocolic fistula caused by a previously inserted intrauterine device: case report. *Contraception*, 56(5), 337-339.
 18. World Health Organization. (1987). Mechanism of action, safety and efficacy of intrauterine devices: report of a WHO Scientific Group [meeting held in Geneva from 1 to 4 December 1986]. World Health Organization.
 19. Mosley, F. R., Shahi, N., & Kurer, M. A. (2012). Elective surgical removal of migrated intrauterine contraceptive devices from within the peritoneal cavity: a comparison between open and laparoscopic removal. *JSLS: Journal of the Society of Laparoendoscopic Surgeons*, 16(2), 236.
 20. Arslan, A., Kanat-Pektas, M., Yesilyurt, H., & Bilge, U. (2009). Colon penetration by a copper intrauterine device: a case report with literature review. *Archives of gynecology and obstetrics*, 279(3), 395-397.
 21. Medina, T. M., Hill, D. A., DeJesus, S., & Hoover, F. (2005). IUD removal with colonoscopy: a case report. *The Journal of reproductive medicine*, 50(7), 547-549.