

GENERALIZED PERITONITIS SECONDARY TO ILEAL PERFORATION BY A RETAINED INTRAUTERINE DEVICE IN A 49-YEAR-OLD WOMAN: A CASE REPORT

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ABSTRACT

Intrauterine devices are commonly used contraceptive methods, and complications are rare but can include uterine perforation and migration into adjacent organs. The condition arises from the migration of the Intrauterine devices from the uterus into the abdominal cavity, where it can embed in and perforate the small bowel, leading to a severe peritonitis from spilling intestinal contents. We report here a rare case of a 49-year-old female who developed generalized peritonitis secondary to ileal perforation caused by a prolonged duration of copper intrauterine device use. Early recognition and timely surgical intervention were crucial for a favorable outcome.

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INTRODUCTION

Intrauterine devices (IUDs) are widely used methods of long-term contraception. Complications include abnormal bleeding, pelvic pain, expulsion, infection, and rarely, uterine perforation, occurring in approximately 1–2 per 1,000 insertions. Risk factors include postpartum insertion, breastfeeding, and uterine anatomical abnormalities. Perforation may remain undetected for years, allowing migration into the peritoneal cavity or adjacent organs. Bowel perforation is extremely rare and may present with abdominal pain, fever, vomiting, intestinal obstruction, or generalized peritonitis^{1,2}. Diagnosis requires a high index of clinical suspicion and appropriate imaging. Pelvic ultrasonography is generally the initial investigation, while abdominal and pelvic radiography can identify an extrauterine device when it is not visualized within the uterus. Computed tomography (CT) is particularly useful for determining the device's location and identifying bowel perforation, inflammation, abscesses, or injury to adjacent organs. Management depends on the location of the device and the severity of complications. Laparoscopic removal is generally preferred for extrauterine IUDs when feasible, whereas laparotomy may be necessary in patients with generalized peritonitis, extensive adhesions, or significant intestinal injury. Bowel repair or resection may be required depending on the extent of perforation and tissue damage. Prompt diagnosis, timely surgical intervention, and multidisciplinary management are essential to prevent serious morbidity and mortality. Although uterine perforation is uncommon, gastrointestinal perforation caused by migration of a copper IUD is extremely rare, making case reports important for increasing clinical awareness and highlighting diagnostic and management challenges^{3,4}.

CASE PRESENTATION

A 49-year-old para 6 woman with no history of chronic illness presented with a four-day history of sudden-onset generalized abdominal pain associated with progressive abdominal distension,

nausea, vomiting, and fever. She had a history of IUD insertion 12 years ago. Following insertion, she haven't had regular follow-up and had not attempted removal of the device. There was no history of difficult or failed IUD removal. On physical examination, the patient was febrile and had a rapid, weak pulse. Her abdomen was distended, with generalized tenderness, guarding, and rebound tenderness. Examination of the other systems was unremarkable. An abdominal X-ray showed that the IUD was no longer in its expected intrauterine position, suggesting extrauterine migration. CT was not performed because it was unavailable in the hospital at the time of patient's presentation. A complete blood count was performed at presentation and demonstrated leukocytosis. A diagnosis of generalized peritonitis secondary to ileal perforation caused by a retained intrauterine device was made. Initial management included resuscitation with intravenous fluids, administration of broad-spectrum antibiotics, analgesia, and nasogastric decompression to relieve abdominal distension and prevent vomiting. Despite these measures, the patient's condition remained critical, necessitating emergency surgical intervention. The patient underwent an emergency laparotomy under general anesthesia. There was a 2 × 2 cm perforation at the uterine fundus. Approximately half of the copper IUD was located at the site of the uterine perforation, while the other portion had migrated into the ileum. The uterine defect contained necrotic tissue, but there was no active bleeding from the uterine wall. The ileum was also perforated at the site of IUD migration and demonstrated necrotic tissue. The uterine perforation was repaired after removal of the IUD and appropriate surgical management of the involved tissues. Surgical management included ileal resection with end-to-end anastomosis, thorough peritoneal lavage, removal of the migrated intrauterine device, and repair of the uterine wall. After the surgery the patient was transferred to the intensive care unit for postoperative monitoring, where she received broad-spectrum intravenous antibiotics, pain management, and supportive

care. Gradual reintroduction of enteral feeding was initiated as bowel function returned, and her postoperative recovery was closely monitored for complications. The patient recovered well postoperatively, with gradual improvement in her clinical condition. Her vital signs and laboratory parameters normalized, and bowel function resumed without complications. She was discharged on the 10th postoperative day in stable condition, with instructions for follow-up. At her one-month review, she remained asymptomatic with no postoperative complications noted.

DISCUSSION:

Uterine perforation with migration of an IUD into the gastrointestinal tract is a rare but potentially serious complication. Although most extrauterine IUDs are located within the pelvic or abdominal cavity, migration into the small intestine, including the ileum, has been documented in previous case reports^{2,5-9}. Such migration may result in intestinal perforation, adhesions, obstruction, and intra-abdominal infection. The rarity of ileal perforation and the potential for nonspecific clinical manifestations make this complication particularly challenging to recognize. Previous reports have also described delayed detection and atypical presentations, emphasizing the need to consider IUD migration in women with unexplained abdominal symptoms and a history of IUD insertion^{2,6-8}. The diagnosis of migrated IUDs can be delayed because symptoms may be mild, nonspecific, or absent, and intestinal injury may develop gradually. Missing IUD strings or failure to visualize the device within the uterine cavity should prompt further investigation rather than an assumption of spontaneous expulsion. Pelvic ultrasonography and abdominal radiography can help establish the location of the device, while computed tomography (CT) is particularly valuable when bowel perforation, adhesions, or intra-abdominal complications are suspected^{2,6,7,10}. In the present case, the diagnostic delay may have been related to prolonged IUD retention without regular

follow-up and the unavailability of CT imaging. This highlights the importance of obtaining a detailed contraceptive history and maintaining a high index of suspicion when evaluating women presenting with acute or persistent abdominal pain. Management of extrauterine IUD migration generally involves removal of the device, with the surgical approach determined by its location, the patient's clinical condition, and the extent of associated organ injury. Previous reports describe successful laparoscopic and open surgical retrieval, with bowel repair or resection when necessary^{3,6,7}. A potential management pitfall is delaying surgical consultation when intestinal perforation is suspected, particularly in patients with generalized peritonitis or signs of sepsis. In the present case, emergency laparotomy revealed uterine fundal and ileal perforations with necrotic tissue. The IUD was removed, ileal resection with end-to-end anastomosis and uterine repair were performed, and the peritoneal cavity was thoroughly lavage. The patient recovered well and was discharged on postoperative day 10. Similar surgical approaches, including IUD removal and bowel repair or resection, have been reported in previous cases. For clinicians in low and middle income countries (LMICs), important lessons include actively asking about previous IUD insertion, investigating missing strings, arranging appropriate imaging when available, and referring patients early for surgical assessment. Where CT is unavailable, clinical assessment, ultrasonography, and abdominal radiography may guide further evaluation and referral. Early recognition, multidisciplinary collaboration, and timely surgical intervention are essential to reduce preventable complications and improve patient outcomes^{1,2,6,7,10}.

CONCLUSION:

Long-duration IUD use can rarely cause serious complications, including gastrointestinal perforation and generalized peritonitis. Appropriate follow-up, awareness of the device's recommended lifespan, prompt evaluation of missing strings or suspected migration, and timely management of

complications are essential to prevent morbidity and improve outcomes.



Figure 1: X-ray findings of generalized peritonitis secondary to perforated ileum following retained intrauterine device in a 49-year-old female patient



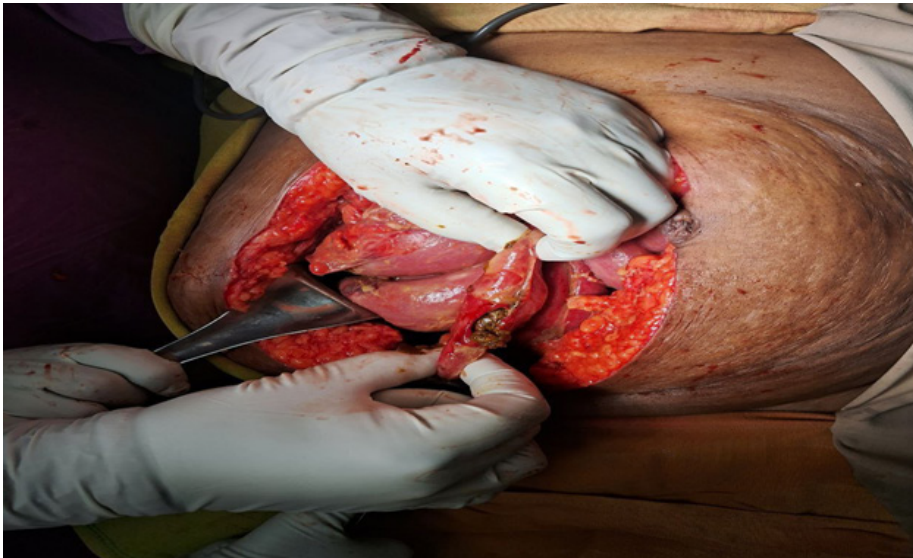
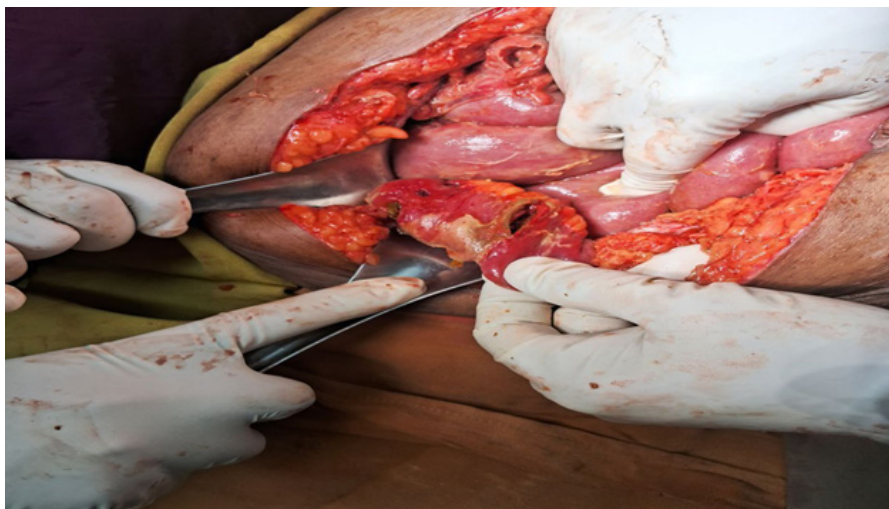


Figure 2: Intra operative findings of generalized peritonitis secondary to perforated ileum following retained intrauterine device in a 49-year-old female patient

Abbreviations

CT scan: Computed Tomography scan, IUD: Intrauterine Contraceptive Device

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Disclosure of ethics statement

The patient gave written formal informed consent for this case report and any related pictures to be published in case report. In order to undertake all procedures in compliance with applicable rules and legislation of Helsinki declaration to protect human subjects and their data, a formal informed consent form was read and signed. All patient information was kept private.

Data availability and materials

Data are available on the reasonable request from the corresponding author.

Competing interests

The authors announce they haven't interest of conflict.

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Authors Contributions

IGA, DGW, SAK, and KNT were the study contributor. DGW and SAK were involved in patient assessment, management, and bring the case for report. IGA and KNT evidence compilation, write-up, and develop manuscript. All authors were involved in document preparation. Finally, all authors have read, and agreed on the manuscript.

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REFERENCES

1. Heinemann K, Reed S, Moehner S, Do Minh T. Risk of uterine perforation with levonorgestrel-releasing and copper intrauterine devices in the European Active Surveillance Study on Intrauterine Devices. *Contraception* [Internet]. 2015;91(4):274–9. Available from: <http://dx.doi.org/10.1016/j.contraception.2015.01.007>
2. Verstraeten V. Migration of Intra-Uterine Devices. 2024;(February):41–7.
3. Sium AF, Abdu AN, Prager S. Evaluation and Management of Intrauterine Device (IUD) Complications in Ethiopia. *Public Heal Challenges*. 2025;4(4):1–5.
4. Tabatabaei F, Hosseini STN, Hakimi P, Vajdani R, Khademi B. Risk factors of uterine perforation when using contraceptive intrauterine devices. *BMC Womens Health*. 2024;24(1).
5. Almatary A, Alsharif A, Ghabisha S, Ahmed F, Badheeb M. Open surgical retrieval of intra-uterine contraceptive device perforating the ileum: A case report. *Int J Surg Case Rep* [Internet]. 2023;109(August):108635. Available from: <https://doi.org/10.1016/j.ijscr.2023.108635>
6. Tani MK, Farda W, Khan H, Malikzai O, Sharif Z. Missing intrauterine device migrated to terminal ileum resembling adnexal mass: A case report. *Int J Surg Case Rep* [Internet]. 2024;115(January):109279. Available from: <https://doi.org/10.1016/j.ijscr.2024.109279>
7. Carroll A, Paradise C, Schuermann K, Schellhammer SS, Carlan SJ. Far migration of an intrauterine contraceptive device from the uterus to the small bowel. *Clin Case Reports*. 2022;10(3):1–5.
8. Disu S, Boret A. Asymptomatic ileal perforation of an intrauterine device. *Arch Gynecol Obstet*. 2004 Mar;269(3):230–1.
9. Chen CP, Hsu TC, Wang W. Ileal penetration by a Multiload-Cu 375 intrauterine contraceptive device. A case report with review of the literature. *Contraception*. 1998 Nov;58(5):295–304.
10. Han JH, Yu EH, Joo JK, Kim MJ, Choi JB, Jung HJ, et al. Laparoscopic management of bowel perforation secondary to levonorgestrel-releasing intrauterine device migration: a case report and review of literature. *J Surg Case Reports*. 2024;2024(8):8–10.