



## Rare Case Report of Generalized Peritonitis Secondary to Perforated Ileum Following Retained Intrauterine Device in A 49-Year-Old Female: Successful Surgical Management at Ambo University College of Health Sciences and Referral Hospital

Iranfachisa Gurmu Amana<sup>1\*</sup>, Kefyalew Naniye Tilahun<sup>2</sup>, Dr. Sinbona Ararsa Keneni<sup>3</sup>, Dr. Diriba Gebeyehu<sup>3</sup>

<sup>1</sup>Quality Unit, College of Health Sciences and Referral Hospital, Ambo University, Ethiopia

<sup>2</sup>Health Informatics, Department of Public Health, College of Health Sciences and Referral Hospital, Ambo University, Ethiopia

<sup>3</sup>Department of Surgery, College of Health Sciences and Referral Hospital, Ambo University, Ethiopia

### ABSTRACT

Generalized peritonitis is a life-threatening condition often caused by gastrointestinal perforation. 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 a rare case of a 49-year-old female who developed generalized peritonitis secondary to ileal perforation caused by a retained intrauterine device. Early recognition and timely surgical intervention were crucial for a favorable outcome.

**Keywords:** CT scan; IUD; Generalized peritonitis; Gastro-intestinal perforation

### ABBREVIATIONS

**CT scan-** Computed Tomography scan, **IUD-** Intrauterine Contraceptive Device

### INTRODUCTION

Intrauterine devices are widely used for long-term contraception. Uterine perforation is an uncommon but serious complication, with the potential to migrate into the peritoneal cavity or adjacent organs. Gastrointestinal perforation caused by a migrated IUD is extremely rare [1]. Prompt diagnosis and surgical management are essential to reduce morbidity and mortality associated with generalized peritonitis [2].

### CASE PRESENTATION

A 49-year-old female presented with no documented chronic ill-

nesses and a four-day history of generalized abdominal pain that was sudden and included increased abdominal distension, nausea, vomiting, and fever. She has a history of intrauterine device (IUD) insertion 12 years ago. Upon physical examination, she had a fever and her pulse was rapid and weak. Her abdomen was distended and examination yielded generalized tenderness, guarding, and rebound tenderness diagnostic of peritonitis. Other systems were normal. The abdominal X-ray and then subsequent tests were indicative of abuse and later systemic infection due to migration of the foreign body, which was confirmed to be a retained IUD located in the ileum and possible bowel perforation.

### Diagnosis

Generalized peritonitis secondary to ileal perforation caused by a retained intrauterine device

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### \*Corresponding author:

Iranfachisa Gurmu Amana; Quality Unit, College of Health Sciences and Referral Hospital, Ambo University, Ethiopia; **Email:** giranfachisa@gmail.com

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## Management

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. Intraoperative, a 3 cm × 2 cm perforation of the ileum was identified, with an intrauterine device protruding into the intestinal lumen. There was a significant amount of purulent peritoneal fluid, indicating generalized peritonitis, but no involvement of other abdominal organs was noted. 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.

## POSTOPERATIVE COURSE

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.

## OUTCOME AND FOLLOW-UP

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.

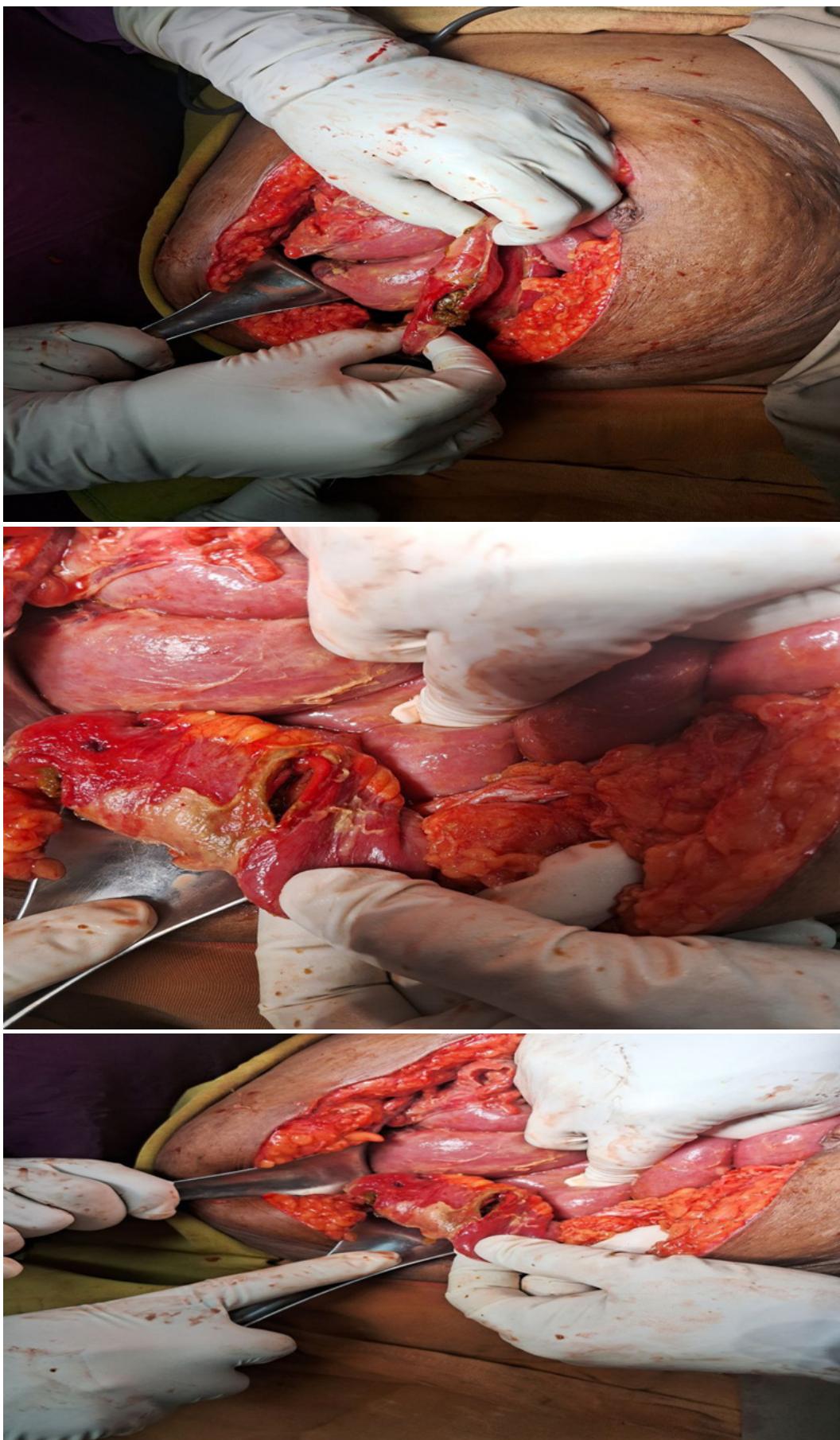
## DISCUSSION

Uterine perforation with migration of IUD into the gastrointestinal tract is extremely rare, with ileal perforation being one of the least reported events. Risk factors include insertion by inexperienced personnel, long-term retention, and uterine abnormalities [3,4]. Clinical presentation may mimic acute abdomen from other causes, making diagnosis challenging. Imaging modalities such as X-ray, ultrasound, or CT scan are valuable for detection. Surgical removal is the treatment of choice to prevent ongoing contamination and sepsis [2]. This case highlights the importance of timely identification of IUD-related complications and early surgical management to prevent morbidity and mortality.



**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

## CONCLUSION

Although rare, retained intrauterine devices can cause life-threatening gastrointestinal perforation and generalized peritonitis. Clinicians should maintain a high index of suspicion in women presenting with acute abdomen and a history of long-term intrauterine device use. Early surgical intervention is essential for a favorable outcome.

## 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.

## FUNDING DECLARATION

The authors received no funding for this case report.

## 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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