

Intraperitoneal migration of an intrauterine device: a case report

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Abstract

The intrauterine device (IUD) is the most widely used contraceptive method worldwide, available in two main types: hormonal and copper. Although uterine perforation following IUD insertion is exceptionally rare, it remains one of the most serious complications. We report the case of a 63-year-old woman who had an IUD inserted 25 years earlier. Gynecological examination revealed absent strings at the cervical os. Pelvic ultrasound and plain abdominal radiography confirmed the diagnosis. The patient underwent exploratory laparoscopy, and the IUD, embedded in the omentum, was successfully removed without visceral injury or complications. Postoperative recovery was uneventful. Although intraperitoneal IUD migration is rare, it requires prompt and optimal management to prevent infectious or visceral complications.

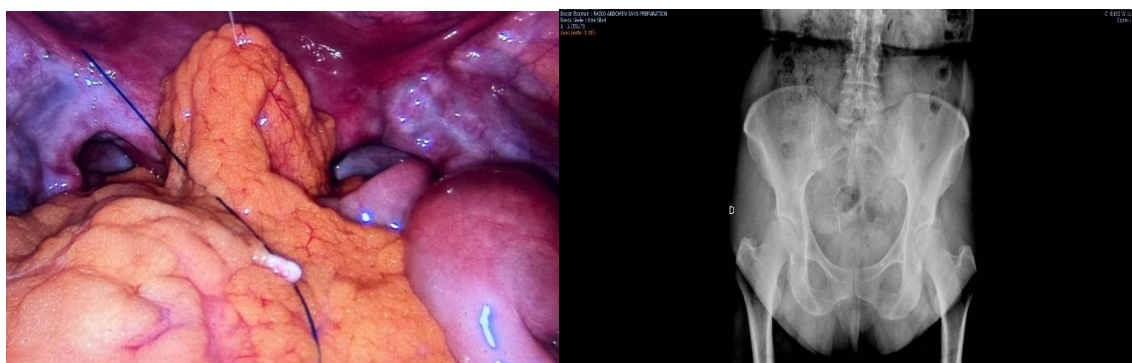
Keywords: IUD, migration, laparoscopy, abdominal X-ray (ASP)

Received 02 Nov., 2025; Revised 11 Nov., 2025; Accepted 13 Nov., 2025 © The author(s) 2025.

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I. Case presentation

We report the case of a 63-year-old woman, residing in France, referred by a community midwife to the Montauban Hospital Center after a routine pelvic ultrasound revealed an empty uterine cavity. Speculum examination had noted the absence of IUD strings at the cervical os. A plain abdominal radiograph confirmed the presence of an extrauterine IUD located in the left iliac fossa. The patient was asymptomatic, reporting no digestive or gynecological complaints.



Introduction

The intrauterine device (IUD) is one of the most widely used contraceptive methods globally: 9.4% in developed countries and 16.5% in developing countries [1]. It provides long-term contraception without adherence concerns. However, its potential complications must be recognized and promptly diagnosed for appropriate management. Uterine perforation is a rare complication, with an estimated incidence of 1.3 to 1.6 per 1,000 insertions [2]. In some cases, perforation can result in IUD migration into adjacent organs such as the mesentery, colon, or bladder.

II. Discussion

The incidence of uterine perforation is rare, not exceeding 1.3 per 1,000 insertions according to large clinical trials [3–5]. Perforations can be **partial**, when only part of the device penetrates the uterine or cervical wall, or **complete**, when the device traverses the uterine wall and enters the abdominal cavity [2–5]. Perforation usually occurs at the time of insertion but may go unnoticed and only be discovered later [6]. Several factors contribute to perforation: Uterine anatomical factors (small uterine size, significant malposition, particularly retroversion, or myometrial fragility from multiple pregnancies) - Hypoplastic or scarred uteri - Technical factors such as forceful insertion -Operator inexperience or error [1,2] Clinical presentation varies depending on the migration site and type of IUD. Diagnosis may be prompted by clinical signs such as fever, abdominal pain, diarrhea, or urinary tract infection, or by complications such as bowel obstruction or peritonitis due to visceral perforation. Most uterine perforations are asymptomatic unless they occur during insertion, in which case sudden, sharp pain may be reported. The absence of IUD strings should raise suspicion of perforation after confirming that the strings have not retracted into the endocervical canal. Abdominal radiography, after ruling out pregnancy, confirms expulsion if the IUD is not visible on the image. Visualization of the IUD, however, does not determine its exact location [9]. The **World Health Organization (WHO)** recommends prompt removal of any misplaced IUD, regardless of type or location [8]. Minimally invasive retrieval techniques are preferred [9]. Laparoscopy remains the **gold standard** for peritoneal cavity exploration. A review of surgical retrieval techniques [9] revealed that 93% of reported cases were managed laparoscopically, while laparotomy was required in 57.1% of cases involving visceral perforation. In our case, endoscopic vaginal retrieval was performed after failed laparoscopic removal.

III. Conclusion

The IUD is a highly effective contraceptive method, and insertion is a straightforward procedure requiring adequate training and experience. Perforation is one of its rarest but most serious complications. Laparoscopy remains the most effective diagnostic and therapeutic modality for managing migrated IUDs.

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