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**Case Report**

# Lost and found: the late discovery of a migrated intrauterine device after 15 years - a case report

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## ABSTRACT

Intrauterine devices (IUDs) are a preferred reversible contraceptive choice for about 159 million women worldwide. While generally safe, they pose risks like uterine perforation and device migration, which happen in about 1 in 1000 insertions. Other common issues include insertion failure, pain, infection, and menstrual changes. This report details a rare case of IUD migration in a 40-year-old woman, discussing the diagnostic challenges and the approaches used to manage such complications. IUD migration to the bladder is uncommon but can lead to serious, often undetected issues, thus underscoring the necessity for regular follow-up after placement. Early diagnosis with imaging is critical for proper treatment, with the World Health Organization recommending surgical removal in symptom-free cases. The rarity of uterine perforation during IUD use highlights the vital need for vigilant monitoring and patient follow-ups to prevent and quickly address such complications. The uncertain timing and cause of IUD migration further stress the importance of comprehensive counseling and regular patient check-ups. Abdominal discomfort may indicate an IUD has migrated, emphasizing the need for patient awareness and routine self-monitoring after placement. CT imaging is crucial for identifying and pinpointing the location of migrated IUDs, facilitating their removal using minimally invasive methods like colonoscopy and laparoscopy. For more complicated scenarios, such as those involving deep embedment, laparotomy may be necessary.

**Keywords:** Intrauterine devices, IUD

## INTRODUCTION

It has been reported that between 7.6% and 14.5% of women in their reproductive years make use of intrauterine devices (IUDs). Although the occurrence of serious adverse effects from IUDs is very minimal, less than 1%, some of the more frequent issues include gynecological infections, uterine bleeding, painful intercourse, irregular periods, and heavy bleeding.[1] Globally, over 150 million women employ the IUD, making it the most prevalent reversible form of contraception. Despite its general safety, IUDs can occasionally lead to notable health concerns.[2] Typical issues arising from IUD use include insertion failures, discomfort, vasovagal responses, infections, menstrual irregularities, and displacement. Rarely, more severe complications such as embedding of the device within the uterine wall (myometrium) and perforation, where the IUD breaches beyond the uterine lining, happen in about 1 out of every 1000 placements.[3] IUDs cause chronic sterile inflammation that stimulates a nonspecific inflammatory response from cells and enhances mucous production, which then becomes a contributing factor for risks like perforation, fistula formation, and device migration.[4] The number of women worldwide using IUDs climbed to approximately 159 million in 2019,

accounting for 8.4% of women of childbearing age. This increase in use correlates with a rise in reported complications.[5] Serving as a commonly opted reversible contraceptive, IUDs, like any medical device, may cause complications such as perforation or migration to nearby organs.[4] In this report, we'll delve into a clinical case involving a 40-year-old woman who encountered an atypical migration of an IUD. We'll detail the events leading up to this uncommon occurrence, the methods used for diagnosis, and the treatment actions taken to address it. The goal of this analysis is to enhance understanding of the possible risks tied to IUDs and to underscore the significance of vigilant follow-up after insertion.

## CASE REPORT

A 40-year-old female patient presented to the outpatient department with complaints of persistent lower abdominal pain and hematuria, accompanied by distressing urinary symptoms such as dysuria and urinary frequency. Her obstetric history was notable for one live birth and two cesarean sections, with the last procedure performed 15 years prior. Additionally, she had a history of one spontaneous abortion 16 years ago. The patient reported the insertion of an IUD 15 years earlier, which was purportedly expelled a few months post-insertion; however, no further verification was carried out post-expulsion.


**Figure 1: X-ray KUB. A radiopaque shadow at the level of right mid ureter and two radiopaque shadows in the area of right kidney.**

Upon clinical evaluation, pertinent investigations were conducted. An X-ray of the kidneys, ureter, and bladder (KUB) revealed a foreign body in the urinary bladder. Further assessment through pelvic ultrasound indicated the presence of thick echogenic material in the uterus, protruding into the urinary bladder, suggestive of a retained foreign body. Post void residual urine volume was notably high, indicating significant urinary retention. A computed tomography (CT) scan displayed ossific densities in the liver, small bowel, and uterine endometrial canal, extending into the bladder lumen, associated with prominent mesenteric lymph nodes, raising the complexity of the diagnostic picture.

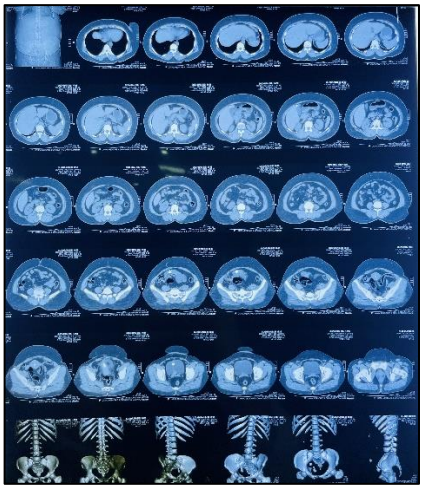

**Figure 2: CT scan abdomen and pelvis-plain. Ossific densities in the liver, small bowl and uterine endometrium canal, the latter projecting into bladder lumen. Mesenteric calcific densities with adjacent mesenteric lymphadenopathy-acute on chronic mesenteritis.**

The decision for surgical intervention was made due to the symptomatic nature and peculiar findings related to the foreign body. The patient underwent a Pfannenstiel incision for exploratory surgery, executed by the urology team. During the procedure, an encrusted IUD embedded in the posterior superior wall of the bladder along with bladder stones were successfully removed. Post-surgical follow-up showed a resolution of the patient's urinary and abdominal symptoms, with ongoing surveillance to monitor any long-term complications due to previous systemic involvements. A multidisciplinary approach, involving gynecologists and urologists, was pivotal in the comprehensive care and successful outcome of this case.

## DISCUSSION

A variety of benign and malignant diseases can lead to hematuria. The presence of visible blood in urine, irrespective of how often it occurs, should always be taken seriously as it could indicate a malignant condition. Among the rarer causes of hematuria that urologists encounter is intravesical foreign bodies. Various vesical foreign bodies have been documented, with a dislodged intrauterine device (IUD) being particularly rare. IUDs are a popular and widely accepted birth control method in the developing world.[6] It provides a reliable, long-term contraceptive solution globally. Typically, IUDs are implanted postpartum during lactation when the uterus is more pliable, which can occasionally lead to unusual

complications.[7] One severe risk is the possibility of the IUD piercing the uterine wall and entering the intestinal space, causing a sterile perforation.[8] While abdominal pain may point to a bowel breach, some perforations do not present symptoms. Migrating IUDs can go unnoticed for extended periods in patients without symptoms.[9] In previously documented instances, many patients with bowel and bladder perforations due to IUD migration did not exhibit symptoms when initially diagnosed.[10] Since routine check-ups post-IUD insertion are not common, migration might only be detected following the onset of abdominal pain, visible clinical symptoms, or during an unexpected pregnancy.[7]

The World Health Organization advises the immediate surgical extraction of migrated IUDs in asymptomatic cases, initially trying less invasive techniques based on the location of the IUD, such as colonoscopy, cystoscopy, or laparoscopy. If the IUD is lodged within an organ like the bladder or colon, an exploratory laparotomy might be preferable.[11] Uterine wall damage during the IUD insertion may also contribute to the risk of it migrating into the bladder area.[12] Uterine perforation is a rare but significant risk associated with the use of intrauterine contraceptives, often occurring without symptoms and sometimes remaining undiscovered for a long duration following the procedure.[13]

In one study, the longest recorded time from insertion to discovery was 43 years.[14] Various imaging techniques are employed to locate a displaced IUD. Both transvaginal and transabdominal ultrasonography are effective for this purpose.[15] With an abdominal X-ray serving as a preliminary examination tool, particularly to identify any IUD-induced calculi. Computed tomography may occasionally be necessary for a conclusive diagnosis.[16] The precise moment of IUD migration into the bladder remains unclear-it might have happened during insertion, through sexual activity, manual labor, or from other unknown causes. Thus, regular counseling and follow-up discussions about IUD usage are crucial for timely detection of migrations and preventing potential complications. In this particular case, the reason behind the IUD's migration is not known, and the patient did not attend her scheduled follow-up appointments.

## CONCLUSION

This case highlights the complexities and challenges arising from the mismanagement of an intrauterine device (IUD), underscoring the need for meticulous follow-up and verification post-insertion. The delayed recognition and subsequent migration of the IUD led to an unusual presentation of systemic manifestations, including ossific densities spread across multiple organs and significant bladder involvement. This not only emphasizes the importance of thorough post-intervention tracking and imaging but also sheds light on the potential systemic responses to chronic foreign bodies. The successful resolution of symptoms following surgical intervention demonstrates the effectiveness of a coordinated multidisciplinary approach in handling complicated intravesical foreign bodies. It stresses that early detection and management could prevent the escalation of associated risks and complications. This narrative serves as a critical reminder of the importance of vigilance and proactive patient management, especially in cases involving the placement of medical devices such as IUDs, to avoid severe health consequences and ensure patient safety.

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