CASE REPORT

Displaced intrauterine contraceptive device: a multidisciplinary approach

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Abstract

Implantation of intrauterine contraceptive devices (IUCDs) has become a common method of family planning. Very few patients experience any complication, which is why it is regarded as a safe method. However, here we present a case in which a calcified intrauterine contraceptive device (IUCD) was seen in the bladder. This intrauterine device had been placed 11 years ago, and the patient had also delivered a healthy baby during this time. It was removed successfully by surgery without injury to the bladder or surrounding structures. The recovery remained uneventful with strict monitoring of the patient. She was discharged on the seventh post-operative day. This report highlights the significance of early diagnosis and management of lost intrauterine device (IUCD) to prevent complications and mismanagement.

Keywords: Intrauterine device, Intrauterine device migration, Laparotomy, Haematuria.

DOI: https://doi.org/10.47391/JPMA.25-21970

Introduction

Intrauterine contraceptive devices (IUCDs) are widely used as the most reliable, reversible, safe, and cost-effective method for family planning. Approximately 18.6% of women in Eastern and South-eastern Asia depend on intrauterine devices as their preferred method of contraception.[1] In only 0.1–0.9% of cases, displaced intrauterine devices are found in the bladder.[2] Patients with retained and migrated intrauterine device present with complaints of chronic pelvic pain, haematuria, dysuria, dyspareunia, dysmenorrhoea, and abnormal vaginal discharge. We present the case of a lady whose intrauterine device had calcified and migrated to the bladder, and who had been treated for six months as a case of urinary tract infection (UTI). Following the diagnosis, a laparotomy was performed, and the patient recovered promptly within one week.

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Submission complete: 12-10-2024 **First Revision received:** 20-12-2024

Acceptance: 13-09-2025 **Last Revision received:** 12-09-2025

Case Report

A 45-year-old woman, gravida 5 para 4, with no known comorbidities, presented to the emergency department of POF Hospital, Wah Cantt on March 25, 2024, with complaints of intermittent haematuria and dysuria over the past six months. Despite multiple visits to the emergency department and receiving symptomatic treatment each time, her pain was only temporarily relieved with analgesics and never fully resolved. This time, she presented with frank haematuria and dysuria. The symptoms were gradual in onset and were not associated with abnormal vaginal discharge, dysmenorrhoea or dyspareunia. On pelvic examination, there was tenderness on deep palpation. She was referred to the urology outpatient department (OPD) for further workup.

The patient visited the urologist on March 27, 2024, and initial investigations were advised including abdominal ultrasound (USG) and X-ray KUB. Ultrasound report was unremarkable, while the X-ray revealed a calcified intrauterine device (IUCD) in the pelvis. To confirm the diagnosis, a CT (computed tomography) scan of the pelvis was performed, which revealed a misplaced intrauterine device with a calcified stem invasion into the urinary bladder and the 'T' of the intrauterine device in the vesicouterine pouch. The patient was then referred to a gynaecologist for the removal of the calcified intrauterine device, which according to the patient had been inserted 11 years back. She was admitted to the gynaecology department for further workup, and surgery was planned to remove the retained and lost IUCD.

During the workup for surgery, it was revealed that she was moderately anaemic with a haemoglobin level of 7.2 g/dL (grams per decilitre) (normal 12 to 16 g/dl). Surgery was postponed until her haemoglobin was optimised with red cell concentrate (RCC) transfusions. However, no cause other than haematuria was identified.

An open laparotomy for intrauterine device retrieval was planned. The patient was optimised for surgery and evaluated for anaesthesia fitness. Initially, the surgery was performed by gynaecologists under spinal anaesthesia.

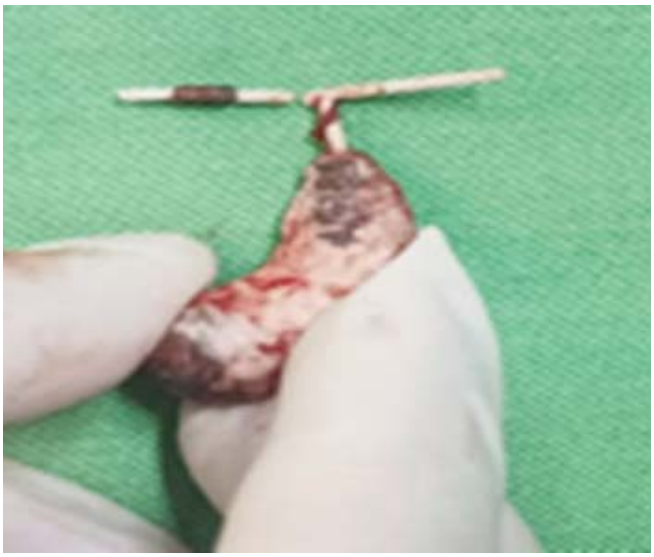

Figure-1:Image showing calcified IUCD extracted from the patient's bladder after open laparotomy.

The abdomen was opened through a Pfannenstiel incision of 10–12 cm. The intrauterine device was not present in the pouch of Douglas but was palpated in the urinary bladder. The urologists were called and the bladder was opened through an inverted 'T' incision, which included a transverse incision at the dome and a vertical incision on the posterior aspect of the bladder, extending to the connection of the intrauterine device with the uterus. The calcified intrauterine device was found, the track identified, and excised. The bladder was repaired and closed in two layers with a suprapubic and urethral catheter in place for two weeks. The omentum was stitched to the fundus of the uterus to prevent fistula formation, and a drain was placed intraperitoneally. Following the retrieval, 24-hour bladder irrigation was performed.

The patient was discharged one week after surgery after the removal of suprapubic catheter.

On her post-operative follow-up, on the 14th day, a CT cystogram was performed, which showed a normal bladder with no extravasation. She was readmitted on the 21st post-operative day for the removal of Foley's catheter and was discharged after she voided urine without any complaints.

Discussion

Keeping in view the rapid population growth, contraceptive methods play a significant role in population control with multiple options available including copper IUCD and hormonal IUCD, with the copper T IUCD being most commonly used.[1] Among all the sites of displacement of an IUCD, invasion in the urinary bladder is the least common.[2]

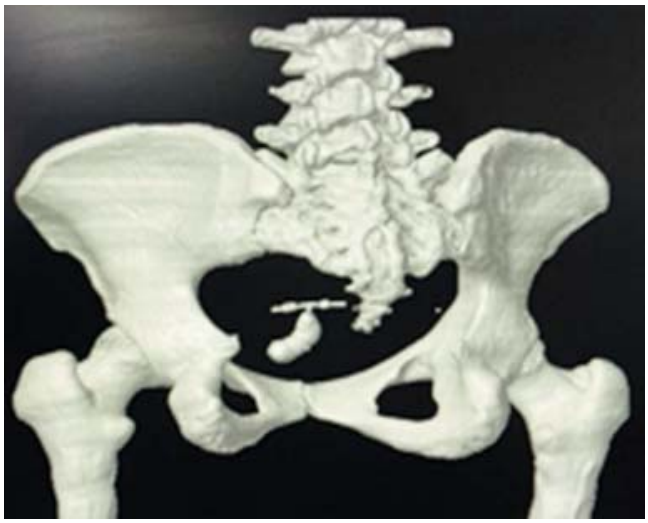

Figure-2:CT scan pelvis with 3D reconstruction showing misplaced IUCD.

The current patient presented for follow-up after a five-year interval; however, current clinical guidelines recommend a follow-up within four to 12 weeks when the intrauterine device (IUD) threads are not visible.[3] The current patient presented with the complaints of haematuria and dysuria which are the most common presenting complaints as is also documented by AG Radhika and S. Chawla (2015).[4]

Cystoscopy was done to confirm the location and identify whether extraction can be done or not and thus it failed to retrieve the IUCD as done in another study by Nigusie T et al.[5]

In the present case, on investigation, USG did not reveal any positive results, which signified that to confirm the diagnosis, advanced imaging techniques such as X-rays and CT scans are required as documented by D. Goswami, AK Ravi (2017).[6] Adeyanju AS, Ogunsola JA, Obajimi GO (2023) indicated bladder lithiasis and excessive haematuria as a complication of displaced IUCD leading to anaemia[7] which might be the cause of anaemia in the current patient as no other cause was present. Anaemia was corrected and surgical intervention was planned as also suggested by AJ kansagra, MS stefen (2016).[8]

As per CT scan findings, we proceeded directly for laparotomy through Pfannensteil incision as indicated by AND Saputra, MN Rehman (2024) who first performed cystoscopy and then laparotomy.[9] The surgery was done under spinal anaesthesia. The bladder was closed, and the patient showed a good prognosis.

This patient showed none of the risk factors, including

previous infections, surgeries, congenital uterine anomalies, or immediate post-partum insertion, yet she experienced this complication. The retrieval of migrated intrauterine device (IUCD) is preferred via laparoscopy than open laparotomy as the procedure is minimally invasive, yet in the present case open laparotomy was opted for as the adhesions were present, and the device was highly calcified.[10] Multiple types of calcifications have been reported but further analysis of this patient's IUCD showed Calcium carbonate type which is most common (75%) according to a study by Patai K et al.[11] Initially, the patient was treated multiple times in the ER as a case of urinary tract infection (UTI) without any evidence, e.g. cultures. This explains the reason for increasing antibiotic resistance in developing nations like ours.

Conclusion

In the face of growing population, multiple methods for contraception have been developed, including intrauterine devices as the preferred one. However, many women, particularly in our country, where the literacy rate is very low, have little knowledge about the need for follow-up after its placement. It is crucial to educate, raise awareness, and counsel women regarding the complications that can occur and proper training should be conducted to ensure correct insertion techniques. Every patient presenting with dysuria might not be a case of urinary tract infection. Therefore, irrational use of antibiotics must be stopped to prevent antibiotic resistance.

Acknowledgement: We would like to extend our sincere gratitude to the patient for granting consent to publish this case report and images.

Disclaimer: None.

Conflict of Interest: The person who signed the letter of approval is also the author of this case report.

Source of Funding: None.

References

1. Saputra AND, Rahman MN, Widyasari A. Removal of Complete Spontaneous Migration of an Intrauterine Contraceptive Device to the Bladder by Cystoscopy. Case Rep Obstet Gynecol 2024;2024:e6934178. doi: 10.1155/2024/6934178.
2. Liu G, Li F, Ao M, Huang G. Intrauterine devices migrated into the bladder: two case reports and literature review. BMC Womens Health 2021;21:301. doi: 10.1186/s12905-021-01443-w.
3. Houmaid H, Harou K, Fakhir B, Bassir A, Boukhanni L, Aboulfalah A, et al. Migration of an intrauterine contraceptive device into the bladder complicated by stone formation an exceptional complication: case report and literature review. Contracept Reprod Med 2024;9:42. doi: 10.1186/s40834-024-00302-x.
4. Radhika AG, Chawla S, Prakash S, Aggarwal R, Radhakrishnan G. The unbelievable case of primary placement of IUCD in urinary bladder. EC Gynaecology 2015;2:117-22.
5. Nigusie T, Solomon F, Degefe M, Almaw S, Tadele A. Intrauterine contraceptive device (IUCD) migration into the bladder with bladder stone formation: Case report. Urol Case Rep 2024;56:e102770. doi: 10.1016/j.eucr.2024.102770.
6. Goswami D, Ravi AK, Sharma A. Missing IUCD Strings: Role of Imaging in Locating the Misplaced Device. J Clin Diagn Res 2017;11:QJ01-2. doi: 10.7860/JCDR/2017/24659.9757.
7. Adeyanju AS, Ogunsola JA, Obajimi GO. Uterovesical Migration of Copper-containing Intrauterine Device Complicated by Bladder Stone Formation. J Midlife Health 2023;14:302-4. doi: 10.4103/jmh.jmh_182_23.
8. Kansagra AJ, Stefan MS. Preoperative Anemia: Evaluation and Treatment. Anesthesiol Clin 2016;34:127-41. doi: 10.1016/j.anclin.2015.10.011.
9. Saputra AND, Rahman MN, Widyasari A. Removal of Complete Spontaneous Migration of an Intrauterine Contraceptive Device to the Bladder by Cystoscopy. Case Rep Obstet Gynecol 2024;2024:e6934178. doi: 10.1155/2024/6934178.
10. Setianingsih YA, Djatisoesanto W, Renaldo J. Laparoscopic removal of migratory intrauterine contraceptive device to the bladder : A Case report and literature review. Radiol Case Rep 2024;19:1650-3. doi: 10.1016/j.radcr.2024.01.047.
11. Patai K, Berényi M, Sipos M, Noszál B. Characterization of calcified deposits on contraceptive intrauterine devices. Contraception 1998;58:305-8. doi: 10.1016/s0010-7824(98)00114-0.

AUTHOR'S CONTRIBUTION:
KA: Proof reading and agreement to be accountable.
ZH: Concept and design.
MHAB & ZA: Drafting.
RJ & KE: Final approval.

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