ORIGINAL RESEARCH PAPER

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CASE SERIES ON EXTRA UTERINE DISPLACED IUCD's AT A TERTIARY CARE CENTRE

KEY WORDS: IUCD, uterine perforation, migration, misplaced IUCD, contraception

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ABSTRACT

Background: Intrauterine contraceptive devices (IUCDs) are among the most widely used reversible contraceptive methods in India. Although generally safe, rare complications such as uterine perforation and migration may lead to serious morbidity. **Aim:** To analyze the clinical presentation, diagnostic modalities, management, and outcomes of misplaced IUCDs. **Materials And Methods:** This observational case series was conducted at Government General Hospital, Guntur, over one year (March 2024–March 2025). Four women diagnosed with misplaced IUCDs based on clinical and radiological evaluation were included. Surgical findings, site of migration, and outcomes were analyzed. **Results:** Of four cases, one was asymptomatic while three presented with abdominal or pelvic pain. IUCD migration sites included pelvis, rectus muscle with omentum, distal ileum with bowel perforation, and bladder. All patients underwent surgical retrieval, with one requiring prolonged ICU care. All patients recovered well. **Conclusion:** Misplaced IUCDs, though uncommon, can cause severe complications. Proper insertion technique, post-insertion follow-up, and early imaging are essential to prevent morbidity.

INTRODUCTION

IUCDs account for nearly **15% of contraceptive use in India** due to their affordability, reversibility, and long-term efficacy.[1,2] Mechanism of action includes creation of inflammatory environment in the uterine cavity which is unfavorable for implantation leading to spermicidal effect. Hormonal iucd in addition to above having progestins like Levonorgetrel causes cervical mucus thickening preventing ascent of sperms, causes endometrial decidualisation, glandular atrophy thereby prevents implantation.[3,4,5]

Despite a favorable safety profile, IUCD-related complications such as expulsion, missing threads, pelvic inflammatory disease, and rarely uterine perforation have been reported. The incidence of uterine perforation ranges from **0.5–1 per 1000 insertions.** [1,6]

Migration of IUCDs into surrounding structures including bowel, bladder, omentum, or abdominal wall has been documented and may remain asymptomatic or present with significant complications.[7] Factors influencing migration include timing of insertion, parity, uterine position, operator skill, and previous uterine surgeries.[1,8]

This case series highlights varied presentations and surgical challenges of misplaced IUCDs at a tertiary care centre.

AIM AND OBJECTIVES

AIM:

To study the clinical profile and management outcomes of misplaced IUCDs.

Objectives:

1. To analyze presenting symptoms of misplaced IUCDs
2. To identify sites of IUCD migration
3. To evaluate surgical management and outcomes

MATERIALS AND METHODS

This observational case series was conducted at Government General Hospital, Guntur, over one year (March 2024–March 2025).

Inclusion Criteria

- Women clinically and radiologically diagnosed with misplaced IUCD
- Diagnosis confirmed by radiological modalities.

Exclusion Criteria

- IUCD confirmed to be in correct intrauterine position

Clinical details, imaging findings, intraoperative findings, and postoperative outcomes were documented. Multidisciplinary management involving gynecologists, surgeons, and urologists was undertaken where required. Informed consent was obtained from all patients.

RESULTS

A total of **four cases of misplaced intrauterine contraceptive devices (IUCDs)** were identified during the study period. The clinical presentation, site of migration, imaging findings, surgical approach, and outcomes are described individually below.

Case 1: Pelvic IUCD with Uterine and intestinal Perforation

A 20 year old P1L1 with previous LSCS with postpartum IUCD insertion 1 year back , went for IUCD removal to area hospital. On per speculum examination IUCD threads were not seen but an attempt of IUCD removal was done. IUCD could not be retrieved and patient was sent home. Two days later she was referred to GGH ER with complaints of severe abdominal pain, fever, vomitings.

On examination, the patient had a **blood pressure of 100/60 mmHg, pulse rate of 110 beats per minute,** and a **temperature of 100.4°F. Per abdominal examination revealed tenderness with guarding.** She was evaluated with ultra sound and CT scan, findings showing moderate ascites, multiple free air pockets in abdomen and pelvis and IUCD was in uterine cavity.

Patient underwent exploratory laparotomy in suspicion of uterine perforation with peritonitis ,with following intra operative findings.

- One litre of faeculent peritoneal fluid.
- Anterior uterine wall perforation of size 1x1cm at isthmus.
- Posterior uterine wall perforation of 0.5x0.5 at isthmus.
- MULTI LOAD 375 IUCD removed from anterior uterine perforation.
- A 3X2 cms perforation noted at distal ileum anti-mesenteric border(20cms proximal to ileo-ceacal junction).
- Perforated part of ileum resected and end to end anastomosis done.
- Loop ileostomy is placed in right iliac fossa.
- Post-operative status of patient was stable with functioning stoma.
- Follow up of patient was done for loop ileostomy reversal after 6 weeks.

The device was retrieved successfully, and the perforation was repaired. She needed ICU care and recovered well.

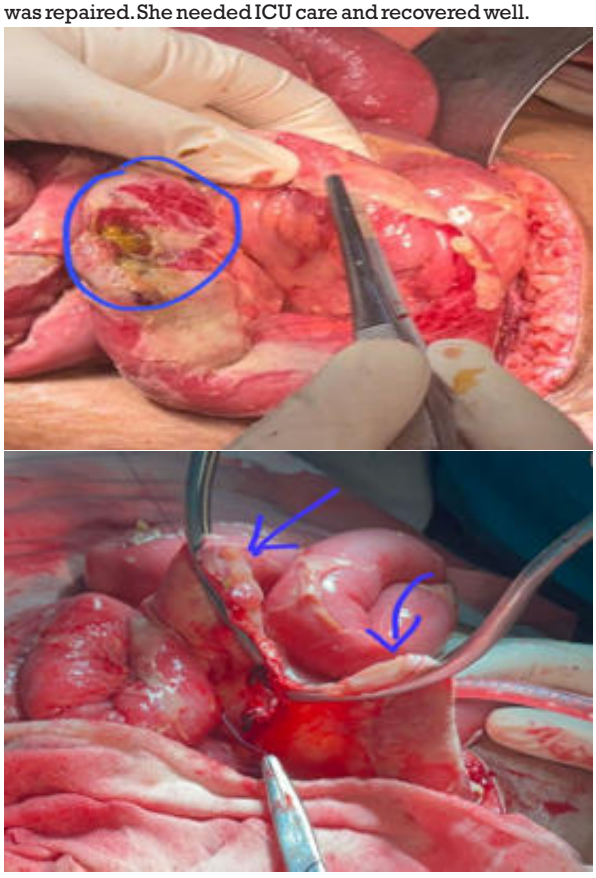

Image reference(GGH, Guntur) (from left to right) :Intra operative of pictures of case 1 showing bowel perforation and 2 ends of ileum that are to be anastomosed after resection of perforated bowel

Case 2: IUCD Migration into the Urinary Bladder

26 year old P1L1 with previous LSCS with postpartum IUCD inserted 16 months ago went for IUCD removal to an area hospital and was referred to our hospital in view of ultrasound showing IUCD in lower uterine segment impending onto bladder wall.

Patient was asymptomatic and her vitals were stable. Patient underwent cystoscopy with following findings , one limb of Copper T 380 A piercing into posterior wall 3 cms behind right ureteric origin;No active bleeding, clots, calculi, growths.

Patient was taken up under double setup for IUCD removal. IUCD was removed vaginally using instrumental IUCD hook. Urologist adviced bladder rest for 4 to 6 weeks with anticholinergic drug coverage. Post op status of patient was stable with foleys insitu for 6 weeks

Image Reference GGH (from left to right): IUCD X-ray Pelvis Photo; Cystoscopy Picture

Case 3: IUCD Migration into Iliac fossa with Omental Encapsulation

A 23-year-old P2L1D1A2 with post abortal day 30 referred in view of pain in right iliac fossa following IUCD insertion. She has no co-morbities and no other complaints

On evaluation her vitals were stable with tenderness in right in right iliac fossa. Evaluation was done with ultra sound and Xray pelvis finding showed IUCD in right iliac fossa.

Patient underwent Exploratory laparotomy for IUCD removal. Intra operative findings include Small 0.5cm sealed perforation on anterior wall of uterus; IUCD wrapped in greater omentum. Localized omentectomy of 3cms was done. Copper T 380A was retrieved. Bowel was explored and found to be normal. Post op events uneventful

Image reference GGH,Guntur(left to right): x-ray pelvis AP view showing IUCD in right iliac fossa; X ray pelvis AP view showing IUCD in right iliac fossa in reference with uterine sound.

Image reference GGH, Guntur(left to right):Sealed uterine perforation on anterior wall ; IUCD embedded in greater omentum being retrieved with artery forceps.

Case 4: IUCD perforation at superolateral wall of cervix

A 25-year-old woman, **P3L3A1**, presented with complaints of **lower abdominal pain for one month,** which was **radiating to the left lower abdomen.** The pain had **increased in intensity over the preceding one week** and was associated with **intermittent episodes of fever**. There was no history of abnormal vaginal bleeding, urinary symptoms, or bowel disturbances.

She had undergone **post-partum intrauterine contraceptive device (PPIUCD) insertion six months prior.** Her immediate post-insertion period was uneventful, and she had not noticed expulsion of the IUCD. Abdominal examination revealed **tenderness in the lower abdomen, more pronounced on the left side,** without guarding or rigidity. Pelvic examination showed **absence of IUCD threads at the external cervical os**. The uterus was normal in size with restricted mobility and mild cervical motion tenderness.

A contrast-enhanced computed tomography (CT) scan of the abdomen and pelvis was performed for further evaluation. Imaging revealed the **IUCD located in the peritoneal cavity**, positioned **adjacent to the left lateral wall of the urinary bladder, abutting the left rectus muscle.** The findings were suggestive of **uterine perforation with migration of the IUCD**, most likely through the **left superolateral wall of the cervix.**

Open laparotomy was performed under general anesthesia. Intraoperatively, the IUCD was visualized in the **peritoneal cavity near the left lateral bladder wall,** adherent to the surrounding peritoneum, without involvement of the bladder or bowel. There was evidence of a **healed perforation at the left superolateral aspect of the cervix**. The IUCD was carefully dissected free and removed without complication. The **post-operative period was uneventful.** On follow-up, the patient was **asymptomatic and had completely recovered**.

Image reference(GGH, Guntur) (from left to right) X ray pelvis and intra operative picture of IUCD removal.

DISCUSSION:

Among the four cases studied**, three patients were symptomatic**, presenting with **abdominal or pelvic pain,** while **one patient remained asymptomatic. Cu-T 380A** was the most commonly used device, identified in **three cases**, whereas **Multiload-375** was used in **one case**. The **sites of IUCD migration** varied and included **uterine perforation with intestinal involvement, migration into the urinary bladder,** and **migration into the iliac fossa with omental encapsulation**; in one case, a **perforation at the superolateral wall of the cervix** was noted**. Emergency laparotomy was performed in 3 cases,** with **one patient underwent cystoscopic retrieval. One patient required prolonged intensive care unit stay,** while **all patients eventually recovered well without long-term morbidity.**

Intrauterine contraceptive devices (IUCDs) remain one of the most commonly utilized reversible contraceptive methods in India owing to their high efficacy, cost-effectiveness, long duration of action, and ease of availability. Despite these advantages, IUCD use is occasionally associated with complications, ranging from minor issues such as abnormal uterine bleeding and missing threads to rare but serious events like uterine perforation and extrauterine migration [7,9].

In the present case series, all four patients had evidence of uterine or cervical perforation with subsequent migration of the device, highlighting that although rare, such complications can result in significant morbidity if not identified early.

Perforation may occur primarily at the time of insertion due to faulty technique or secondarily due to gradual erosion of the uterine wall, facilitated by uterine contractions and inflammatory responses [9,10]. Several risk factors have been implicated, including recent childbirth or abortion, lactation, previous uterine surgery (especially LSCS), abnormal uterine position, and insertion by inadequately trained personnel [2,6]. In the present study, three out of four cases had IUCD insertion in the postpartum or post-abortal period, and two patients had a previous LSCS, supporting the association between recent uterine manipulation and perforation. [7,11].

In the present series, migration sites included the distal ileum with bowel perforation, urinary bladder, iliac fossa with omental encapsulation, and superolateral wall of the cervix, demonstrating the wide spectrum of extrauterine IUCD locations. Bowel involvement, as seen in Case 1, represents a severe complication and may present with peritonitis, sepsis, and need for bowel resection, as also described by Key et al. and Carson et al. [12,13].

Bladder migration of IUCDs, although uncommon, has been reported and may present asymptomatically or with lower urinary tract symptoms, hematuria, recurrent infections, or calculus formation [14]. In the present series, the patient with bladder involvement was asymptomatic and diagnosed incidentally during evaluation for IUCD removal, emphasizing the importance of imaging in cases of missing threads. Early diagnosis allowed minimally invasive cystoscopic management, preventing long-term urological complications. [2,14].

Although uterine perforation most commonly involves the fundus, several studies have reported **perforation through the cervical canal and lateral uterine wall** similar to case 4, particularly in the postpartum period when the uterus is soft and involuting. [10].

The absence of IUCD threads on per-speculum examination was a consistent finding in all cases, reinforcing that "missing threads should always be investigated" and not assumed to represent spontaneous expulsion. Imaging modalities such as ultrasound, plain X-ray pelvis, CT scan, and cystoscopy play a pivotal role in localization of the device and surgical planning [15]. CT imaging was particularly useful in the case with bowel perforation, enabling prompt surgical intervention.

According to World Health Organization recommendations, all extrauterine IUCDs should be removed irrespective of symptomatology, due to the risk of adhesions, perforation of adjacent organs, fistula formation, and infection [16]. In the present study, all patients underwent surgical removal, with emergency laparotomy in three cases and cystoscopic retrieval in one case, in line with standard management guidelines. Although one patient required prolonged ICU care, the overall outcomes were favorable, with complete recovery in all cases.

CONCLUSION

Misplaced IUCDs represent rare but potentially life-threatening complications of an otherwise effective contraceptive method. Proper case selection, skilled insertion, patient counseling, and routine follow-up are

essential. Early diagnosis and timely surgical retrieval significantly improve outcomes.

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