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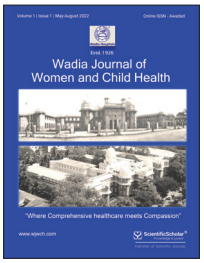

Case Report

An enigmatic tale of the missed and migrated tail

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ABSTRACT

We, report a case of missing and migrated intrauterine device presenting as vague abdominal pain. The patient had symptoms of vaginal discharge and menstrual disturbances as polymenorrhagia and leukorrhea. She was evaluated for a suspected malignancy of the ovaries. During evaluation on pelvic CT scan, the missing and migrated Intrauterine Contraceptive Device (IUCD) was located in the small bowel and tumor markers were normal. We treated her with antibiotics for presumptive diagnosis of pelvic inflammatory disease and then posted her for the evaluation of the missing IUCD and the tubo-ovarian masses by endoscopy. The missed IUCD was seen embedded in the terminal ileum with intraperitoneal adhesions and the tubo-ovarian masses. The IUCD was removed endoscopically enterotomy of ileum which was sutured. The patient recovered well and was discharged on the 6th post-operative day.

Keywords: Intrauterine contraceptive device, Malignancy, Tubo-ovarian mass, Polymenorrhagia, Enterotomy

INTRODUCTION

Intrauterine Contraceptive Devices (IUCD) are reliable forms of long-term reversible contraception. The known IUCD complications are uterine bleeding, increased risk of ectopic pregnancy, pelvic inflammatory disease, perforation of uterus, and rarely misplacement and migration of the device.[1] The clinical presentation of women with migrated IUCD depends on the location of migration. Migration of IUCDs has been reported in the medical literature in the past. The location sites reported are descending colon, broad ligament, and urinary bladder.

This case report highlights the importance of follow-up after IUCD insertion and awareness of missing thread.

CASE REPORT

Ms. AB, 39-year-old, presented to us with complaints of fever for 2 weeks, vague, dull aching, abdominal pain intermittently for past 5 years. She also had symptoms of nausea, vomiting, and dyspepsia along with a history of weight loss over last 5 months. She had delivered three children by vaginal route and had two spontaneous miscarriages. The IUCD, CuT (Copper T) chosen as a method of contraception, was inserted 10 years ago. She was asymptomatic apart from the menstrual irregularities which started 4 years back as polymenorrhagia and foul-smelling vaginal

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discharge. The patient had no significant medical or surgical history. She had visited many gynecologists and was treated with antibiotics for the foul-smelling vaginal discharge. There was no mention of CuT thread being palpated by her; however, an ultrasonography done 6 months back did not show any IUCD in the uterine cavity but showed bilateral complex ovarian cysts. The patient had been referred to an oncologist in view of suspected ovarian malignancy. CA 125, β-human chorionic gonadotropin (bHCG), α-fetoprotein (AFP) and CA 19-9 were done and they were normal. She underwent pelvic sonography as well as MRI and CT scan of the abdomen and pelvis which revealed that the IUCD was located inside the peritoneal cavity in the right iliac fossa adjacent to the uterine fundus. The patient was referred to our hospital for IUCD removal and treatment of bilateral tubo-ovarian masses.

On general examination, she had signs of anemia and nutritional deficiencies as beefy red tongue. Abdominal examination revealed a doughy feel and a vague tenderness was elicited on deep palpation. There was no guarding or rigidity. A pelvic mass was palpable per abdomen approximately 22 weeks of uterine size. It was regular in shape and firm in consistency. Per speculum examination showed hypertrophied cervix without any erosions. On per vaginal examination, forniceal masses felt on both sides were non-tender. Fullness was noted in the cul-de-sac. No dilated veins were seen over the neck and lower extremities. Pap smear was collected and she was admitted for evaluation. On investigations, she had severe anemia (Hb-7 g%), normal tumor markers, pap smear was negative for intraepithelial malignancy, and clue cells were present with inflammation.

Radiograph of the abdomen revealed a radiopaque linear foreign body which corresponds to IUCD visualized within the peritoneal cavity in the right iliac fossa. No evidence of significantly dilated bowel loops or air-fluid levels were seen. There was no evidence of any free gas under diaphragm [Figure 1]. Pelvic sonography showed normal uterus measuring 6x3.4 cm, bilateral bulky ovaries with the right ovary measuring 5.6x2.9 cm and left ovary measures of 10.3x6.6 cm, and bilateral cysts with the largest cyst measuring 4.7 cm with multiple internal dense echoes. Bilateral ovarian pedicle showed normal vascular color flow and waveform. No free fluid was seen in pelvis. Features suggestive of ileal adenopathy, fluid-filled cecum, and thickened ileal wall were also noted [Figures 2-4].

CT abdomen and pelvis [Figure 5] revealed bilateral predominantly cystic adnexal lesions with incomplete septage with features suggestive of hydro/pyosalpinx and left ovary was not seen separately. There were indeterminate para-aortic and left common iliac adenopathy, ill-defined fat stranding in the lower omentum, and peritoneum in pelvis with mild ascites. These infective than neoplastic in etiology. The IUCD was visualized within the peritoneal cavity in the right iliac fossa, adjacent to the fundus of the uterus. Enhancing lesion was seen in the fundus of uterus posteriorly,

Figure 1: X-ray abdomen- the black arrow showing the missing and migrated IUCD.

Figure 2: Tubo-ovarian mass. White arrow depicts the the tubo-ovarian mass in pelvic sonography.

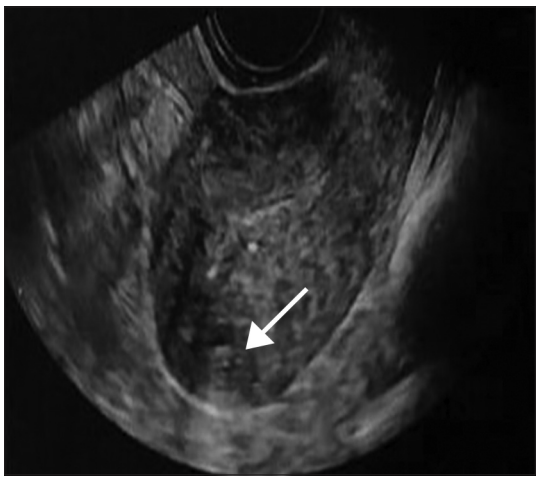

Figure 3: White arrow depicts the bulky ovary as seen on pelvic sonography.

with tiny cystic area within either like adenomyosis or due to uterine perforation. Mild left hydronephrosis seen, could be due to compression by the adnexal masses or over-distended bladder. There was enhancement along the wall of the left lower ureter suggestive of ureteritis. MRI pelvis revealed left ovary of 9.4 x 4.4 x 5.8 cm size with a large cyst of 3.5 cm diameter showing heterogeneous fluid content with no septae or solid areas. The right ovary of 5.4 x 4.1 x 3.8 cm size showed few cysts largest being 2.1 x 3.2 cm diameter with heterogeneous content, but no septae or solid component. There was no evidence of torsion. Uterus measured 9.7 x 3.5 x 4.3 cm with endometrial thickness of 3 mm.

She was admitted and given intravenous antibiotics for the management of pelvic inflammatory disease and responded well within 3 days. Diagnostic laparoscopy revealed intraperitoneal adhesions over anterior abdominal wall and bowel was adherent to the posterior uterine wall at the fundus. Bilateral tubo-ovarian masses were also seen. Adhesiolysis was done and the cecum was separated from the posterior wall of uterus. IUCD thread was noted to come out of the cecum at the level of ileocecal junction [Figure 6]. Bilateral salpingo-oophorectomy was done due to severe adhesions over tubo-ovarian masses. The IUCD was removed from the ileocecal junction [Figure 7]. A rent occurred in the ileocecal junction which was sutured laparoscopically. Intraperitoneal drain was placed. Postoperatively, the patient started on oral sips after 3 days and was discharged on the 6th post operative day. Histopathology of the masses revealed tubo-ovarian actinomycotic infection. There was no evidence of malignancy.

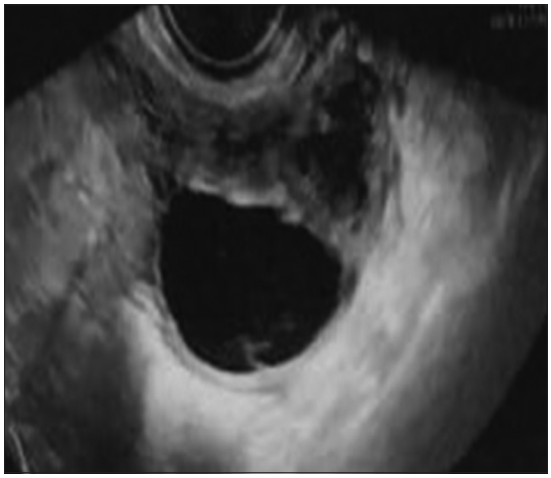

Figure 4: Sonography pelvis reveals Tubo-ovarian cystic mass.

DISCUSSION

IUCD is an effective and safe form of long-acting reversible contraception. Although complications such as uterine bleeding or abdominal pain may cause reluctance in the use of IUCD, appropriate counselling is a must. IUCD migration can create a grievous situation.[2] The migration of IUCD is based on the postulate about the timing of insertion, parity, uterine contractions, and the technique of insertion.[3] As it is made of copper metal and due to the inherent property of the metal to cause inflammation, the likelihood of adhesion formation always remains high. The missing thread of IUCD is the first sign of recognition of either having been expelled or having migrated IUCD. A misplaced IUCD is usually recognized within the 1st year after insertion. It can remain asymptomatic or cause vague generalized abdominal pain as in our case. Symptoms depend on the location of the IUCD.[4] Ultrasound and X-ray of abdomen and pelvis are the initial investigations carried out in suspected cases of missing or migrated IUCD. CT scan of abdomen and

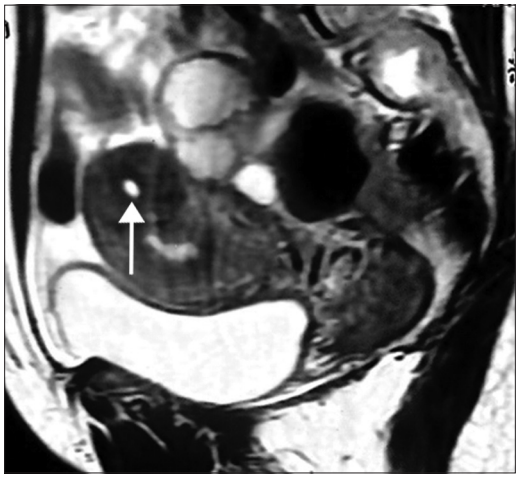

Figure 5: CT abdomen and pelvis. CT Abdomen and Pelvis shows uterus with embedded CuT at fundus (white arrow)

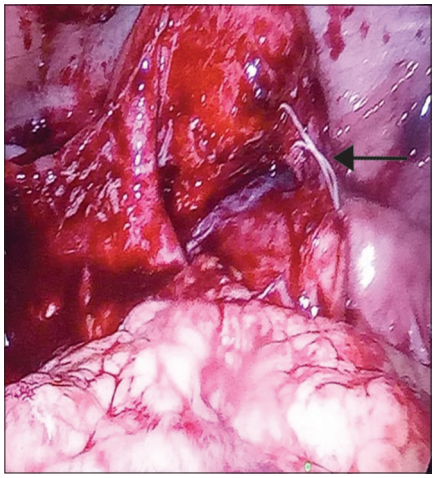

Figure 6: Arrow showing tail of intrauterine contraceptive device seen buried in the terminal ileum.

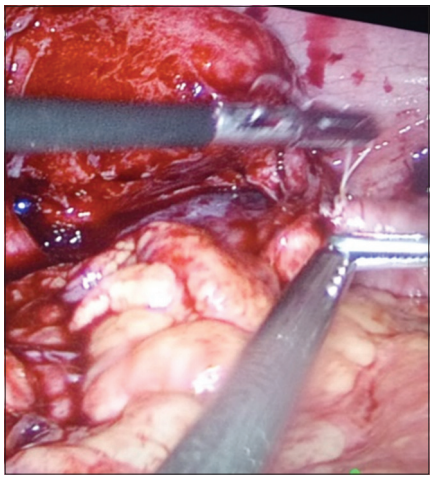

Figure 7: Removal of embedded intrauterine contraceptive device by laparoscopic grasper.

pelvis aids in the exact localization of the migrated IUCD outside the uterine wall. The extraction of IUCD may be done by laparoscopy or by laparotomy. Endoscopic retrieval becomes technically challenging when the IUCD has been embedded in the lumen of hollow organs such as small bowel loops or sigmoid colon. In our case, IUCD was buried beneath the ileal wall at the ileocecal junction. We managed to extract it by the endoscopic route with the anticipation of ileal enterotomy. A reported conversion rate of endoscopic surgery to laparotomy was 34.6% in a systematic review and adhesions were reported to be present in the majority of cases requiring laparotomy.[5]

CONCLUSION

Migration and perforation of IUCD inside the pelvic cavity although rare, is a serious complication which mandates the correct procedure of insertion and the importance of proper follow-up post IUCD insertion. The migrated IUCD may invade the adjacent organs with inbuilt inflammatory properties of copper metal. The exact location of migrated IUCD is confirmed with ultrasonography and CT scan. The endoscopic route is preferable wherever possible and a conversion to laparotomy also to be kept at low threshold. Liaison with the surgical team is helpful whenever there is anticipation of bowel involvement due to adhesions.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent.

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Nil.

Conflicts of interest

There are no conflicts of interest.

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