Case Report

Migrated IUCD into the Pelvic Organs and Abdomen: Case Series

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Abstract

The intrauterine contraceptive device (IUCD) is a popular form of long acting reversible birth control (LARC) for women with reported effectiveness of over 99%. It has low cost, very effective and has few side effects. Despite having low complications rate, a rare but serious complication of its extra uterine migration is reported in the literature. The exact cause of its perforation and migration out of the uterus is not exactly known however it may be related to the time of insertion, multiparity, operators experience and previous cesarean sections. Its migration can be seen in a number of locations such as a peritoneal cavity, fallopian tubes, large and small bowel, omentum and mesentry and also into the bladder. Its migration into the bladder is associated with urinary symptoms and IUCD itself acts as a foreign body resulting in calcifications and calculus formation around it. Its migration into the bowel may result in bowel obstruction and fistula formation. It may also lead to inflammation and abscess formation. It may also migrate extra uterine and remain there for years without any serious complications. We report seven cases of migrated IUCD into multiple extra uterine locations which were retrieved successfully with no significant postoperative complications.

Key Words: Copper T, Reversible contraception, Migration, Retrieve, puerperium.

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Introduction

Intrauterine placement of contraceptive device (IUCD) has been widely used as a reversible and cost effective means of contraception. However, complications related to IUCD placement are immediate or delayed or both. Immediate complications include partial perforation of the uterus, vagal reaction, bleeding and pain. Delayed complications include spontaneous expulsion, lost IUCD, ectopic pregnancy, pelvic inflammatory disease (PID), uterine perforation, heavy bleeding, dysmenorrhea, and unplanned pregnancy. Perforation of the uterus is estimated between 0 and 1.60/10,000 insertions and its migration into the urinary bladder and subsequent stone formation is a rare finding with few cases stated in the literature.[1,2]

The exact cause for uterine perforation and migration is not known however one of the important factors may be is probably the operator's experience in IUCD application. Other factors affecting uterine perforation are uterine size, position, the timing of the insertion (insertion in the postpartum period), congenital uterine anomalies and former surgeries and multiparity.[3]

IUCD is associated with a grave complication of migration into the myometrium of the uterus and potentially into the intraperitoneal cavity and surrounding viscera. Rarely, an intrauterine contraceptive device may further perforate the uterus and migrate extra uterine into the small or large bowel.[4] There have been cases reported of its migration into the sigmoid colon and hence leading to its perforation.[5]

We report cases of extra uterine migrated IUCD into multiple locations which were retrieved successfully by Invasive Surgery. All patients recovered well.

Case Series

Case 1: A 35 years old female (Para 8) presented to the gynaecologist with on and off burning micturation and hematuria for the last one year. She gave history of placement of IUCD five years back, however her IUCD

thread was not visible per vaginal and per speculum examination. The thread was not retrievable after probing of the cervical canal. She was advised an USG pelvis and KUB for localization of IUCD and also for her urinary complaints. Her USG showed no evidence of an intrauterine contraceptive device, however there was a large vesicle calculus with posterior acoustic shadowing. Urine analysis showed 6-7 leukocytes and 10-12 erythrocytes per high power field. She further underwent X-ray abdomen and pelvis for localization of IUCD which showed the pelvic location of IUCD with lobulated areas of calcifications along its limbs (fig 1). The possibility of migrated IUCD into the bladder with subsequent stone formation was suspected by a radiologist. She further underwent cystotomy and calcified IUCD was retrieved by the gynaecologist (fig 2). Patient made an uneventful recovery and no post procedure complications were noted.

Case 2: Another patient also had history of placement of copper T, IUCD 18 months back in puerperium. She presented with mild fever and pelvic discomfort one year after placement of her IUCD. She had not sought any medical advice during her complaints. On presentation to the gynaecologist her IUCD was suspected to be expelled (without patient being aware), misplaced/ migrated as her IUCD thread could not be localized. Her X-ray abdomen showed IUCD to be in pelvic region however USG showed an empty uterine cavity. For exact localization she further underwent a CT scan. CT scan showed migrated IUCD interposed between the uterus and bladder. Thickening, irregularity and abnormal enhancement was noted along the anterior uterine wall with IUCD embedded into the posterior wall of the bladder. There was also evidence of abscess collection along the bladder wall. Per operative findings confirmed the CT findings and the embedded tail of IUCD was gently removed, the abscess was drained, bladder wall was stitched.

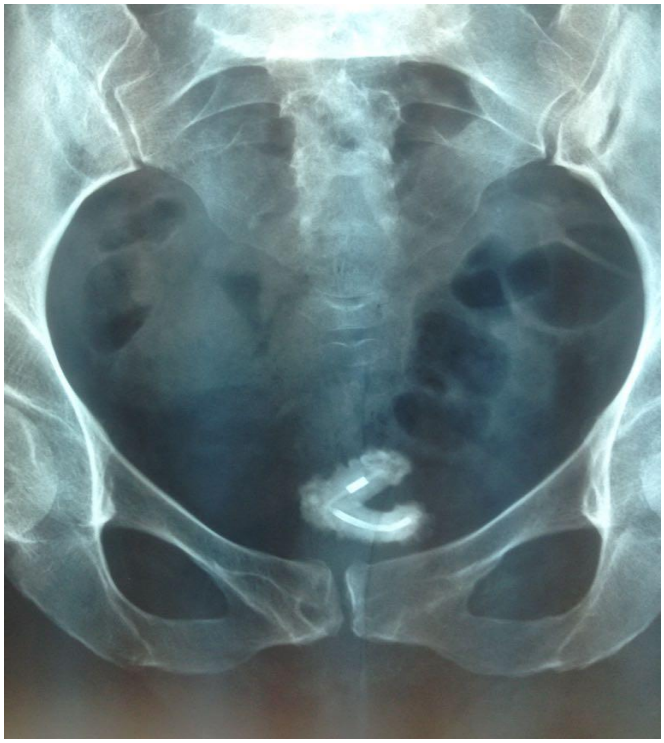

Figure 1. Coned image of X ray pelvis showing IUCD which is deformed and shows calcifications around it.

Case 3-5: Three patients with placement of IUCD 3- 5 years back also presented to their gynaecologist with complaints of loss of IUCD thread. They subsequently underwent USG pelvis which reported the absence of IUCD in the uterine cavity. These patients underwent an X-ray which showed IUCD in the right side of the abdomen, beneath the splenic shadow and central abdomen respectively. Their per operative findings showed IUCD beneath the liver, spleen and in small bowel mesentry without any evidence of bowel perforation/ pneumoperitoneum and abscess formation. These were successfully retrieved by the surgeon.

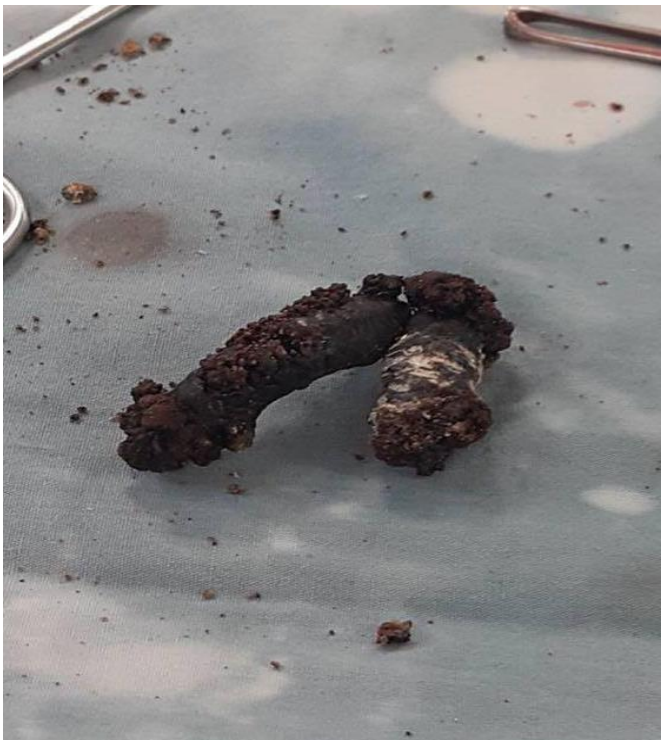

Figure 2. IUCD after retrieval.

Case 6: Another 38 years old female patient Para 5 presented similar complaints of failure to locate IUCD thread. She also complained of pain during defecation.

It was placed after delivery. Radiological investigations (X-ray and USG) showed absent IUCD in uterus however it was seen in the pelvis on x-ray. Per rectal examination showed IUCD attached to the anterior rectal wall which was removed in a single setting and patient was followed for a couple of weeks for any fistula formation. However, her follow up was uneventful.

Case 7: A patient Para 8 with placement of IUCD after delivery was diagnosed as a case of migrated IUCD into the right hemipelvis. She wanted to undergo a tubal ligation and hence it was decided by the gynaecologist that tubal ligation and search for migrated IUCD will be done in the same surgical attempt. Her contraceptive device was found in the right fallopian tube and in the adjacent peritoneal area. However, no abscess formation was noted. Inflammatory changes, edematous right fallopian tube and minimal adjacent fluid was noted. Her IUCD was successfully retrieved and tubal ligation was done.

Discussion

Uterine perforation of IUCD may occur by two mechanisms. It can occur either at the time of insertion or can be seen due to gradual pressure necrosis of the uterine wall by IUCD with subsequent migration out of the uterus.[1] In our case it was seen five years after placement likely by the second mechanism of pressure necrosis. The device can either be partially or completely encrusted with calculi. In our patient it was completely encrusted with calculi. Cystoscopic retreival was not possible in Simmi Agarwal[1] study and was retrieved by cystotomy. In our patient also IUCD was retrieved by cystotomy. Sataa S et al[3] stated Bladder calculus resulting from the migration of an intrauterine contraceptive device in ten patients.

According to Tosun M et al IUD perforated the uterus and migrated to the bladder while the patient was 8 weeks pregnant.[6] However in our 7 reported cases none of the patient was pregnant. Vesicolithiasis is a rare condition in an otherwise normal bladder that can be caused by a number of conditions such as bladder outflow obstruction and recurrent infections, and intravesical foreign bodies. A rare iatrogenic cause of vesicolithiasis in a migrated intrauterine contraceptive device (IUCD).[7]

A 38-year-old woman gave a history of IUD insertion 18 months before. She developed urinary complaints and gradually evolving dyspareunia for the last 12 months. Imaging and cystoscopy detected the presence of IUD in the urinary bladder. Under anesthesia, the IUD was removed out of the bladder without any complications. Her follow-up evaluation six months later, her sexual function were significantly improved and she had no urinary symptoms.[8] Sexual difficulties/ urinary tract symptoms in a woman with an IUD should raise the suspicion of device dislodgement or dislocation. In our cases the patient had no sexual complaints. In the literature, at least 40 cases of IUD migration to the urinary bladder have been reported over a period of ten years.

An unusual case of an intrauterine contraceptive device (IUCD) was seen migrating through the uterus into the peritoneal cavity and hence into the sigmoid colon, which was retrieved laparoscopically.[4] In our patient tail of the IUCD was seen embedded into the rectal wall. It was asymptomatic however patient only presented due to the failure of localization of IUCD thread. It was removed under anaesthesia. A 34 years old lady suffered from a migrated intrauterine copper device into the rectum though she was asymptomatic for two years. The diagnosis was made by a combination of x rays, ultrasound and laparoscopy. Successful removal was performed by performing diagnostic laparoscopy, colonoscopy and anterior resection of bowel in the same settings.[9]

The fate of IUCD once it has migrated from the uterus into the abdominal cavity varies. A significant minority become embedded in the omentum6. in our case it had migrated into the abdominal cavity and was embedded into the small bowel mesentry. Though chemically and biologically inert there is the possibility of development of complications due to IUCD acting as intra-abdominal foreign bodies.[10]

According to the study of Frances R. Mosley et al 60 out of 129 cases of IUCD migration were located within the abdominal cavity; of these, most were embedded in the omentum or related to the bowel, with just 10% (6/60) being free within the abdomen. In our case free intra-abdominal IUCDs were located on x-ray and surgery beneath the spleen, liver and small bowel mesentry.[11]

A case of pyosalpinx caused by the tubal migration of a copper T IUD is reported in the literature. The tail of the device was embedded in the mesocolon.8. In our case the embedded IUCD was found in the right fallopian tube when patient was undergoing tubal ligation. However, no associated pyosalpinx or associated abscess is noted.[12]

IUCD are safe, effective and economical but are not free of complications. Loss of thread and empty uterus does not confer its expulsion. The patients have to be thoroughly investigated before being labeled so as there may be serious consequences due to its migration into adjacent and far organs.

Conclusion

Chronic pelvic pain and urinary symptoms with possible misplaced / migrated IUCD must be carefully searched for possible perforation of the uterus with intravesical migration/ peritoneal / pelvic visceras migration of IUCD. Any displaced IUCD should be removed due to potential complications. Though not many cases of IUCD migration has been reported in the literature yet it cannot be regarded as a rare complication merely due to lack of available literature. The reported cases in this article has been data collected over a time period of four years with combined data of radiology and gynaecology department. The true incidence of the uterine perforation by an IUD is most likely higher than reported. Most of the cases reported had IUCD placed immediately after delivery. Placement of the device after puerperium may be a safe option once involution of the uterus is complete. A regular follow up for detection of IUCD misplacement is stressed as it can have an unusual presentation.

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