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Displacement of IUCD: A Case Report



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ABSTRACT

Intrauterine contraceptive devices (IUCD) are commonly used contraceptives in worldwide. Malposition and displacement of IUCD is an important drawbacks like other conventional intrauterine devices. Present report describes the case of 39-year-old female came for elective admission for IUCD removal on 20.02.2023. On investigation IUCD is seen in upper part of the pelvic cavity. Laparoscopic removal of IUCD done.



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INTRODUCTION

The intrauterine contraceptive device (IUCD) is gaining popularity as a reversible form of contraception. First described for humans in 1909 by Dr. Richard Richter (1). It is the most popular reversible form of contraception today, with more than 168 million users worldwide (2). 83% of IUCD users worldwide live in Asia (3). IUCDs worldwide have effectiveness in prevention of pregnancy about 98-99% (4). IUCDs can be divided into three basic types: inert, copper containing and hormone containing (5). IUCDs prevent pregnancy by producing chronic inflammatory changes in the endometrium and fallopian tubes that have spermicidal effects, inhibit fertilization and create an inhospitable environment for implantation (4,6,7). Ultrasonography is the most common initial method of evaluation of IUCDs. The correct positioning of an IUCD within the uterus is that of a T-shape. The stem and the arms of the “T” should be identified, with the arms toward the internal os and the arms in the fundal region within the endometrium (8).

CASE REPORT

A 39-year-old female (para 6) came for elective admission for IUCD removal. Diagnostic hysteroscopy showed no IUCD in the endometrial cavity. She has history of inserted IUCD two years back after the delivery of her 5th baby. But she conceived within one year with IUCD in situ.

IUCD was seen in antenatal ultrasound posterior to placenta. Normal vaginal delivery was done. IUCD was neither seen expelled at the time of delivery or it was located within placenta. Follow-up ultrasound after delivery IUCD was seen in lower part of uterine cavity and tried to remove the IUCD but only thread came off.

A follow-up ultrasound two months later showed mild endometrial collection, part of IUCD in upper part of uterine cavity embedded in myometrium. X-ray pelvis done –IUCD was seen in upper part of pelvic cavity. CT pelvis showed stem and left limb of IUCD at posterolateral part of myometrium of fundus at left side and rest part (right limb) is outside the uterus. (Fig A-G)

A week later laparoscopic removal of IUCD was done with bilateral tubal ligations.



Fig- A: Plain X-ray of Pelvis

Fig -B: Transverse CT Scan

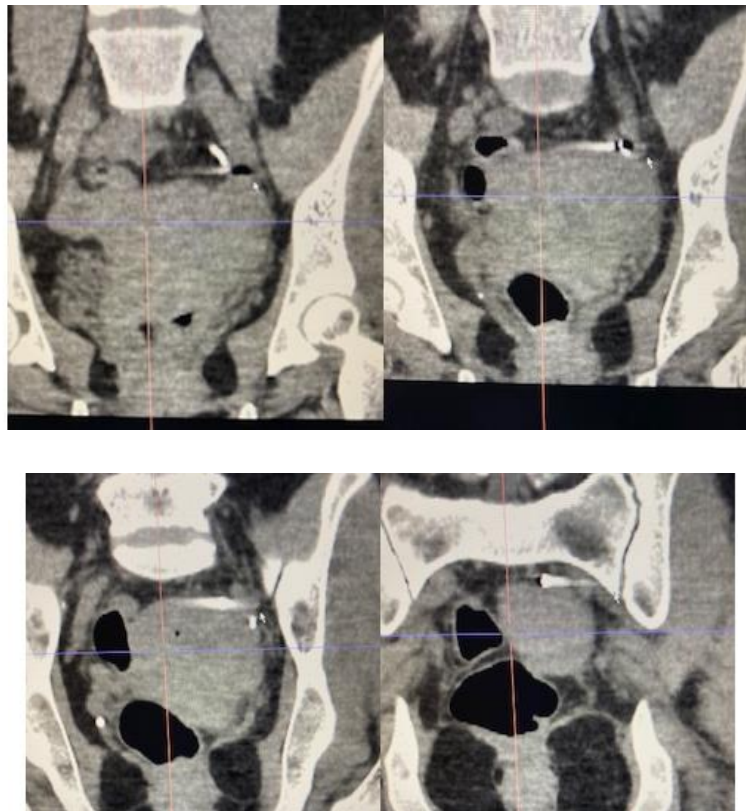


Fig- C: Coronal CT scan

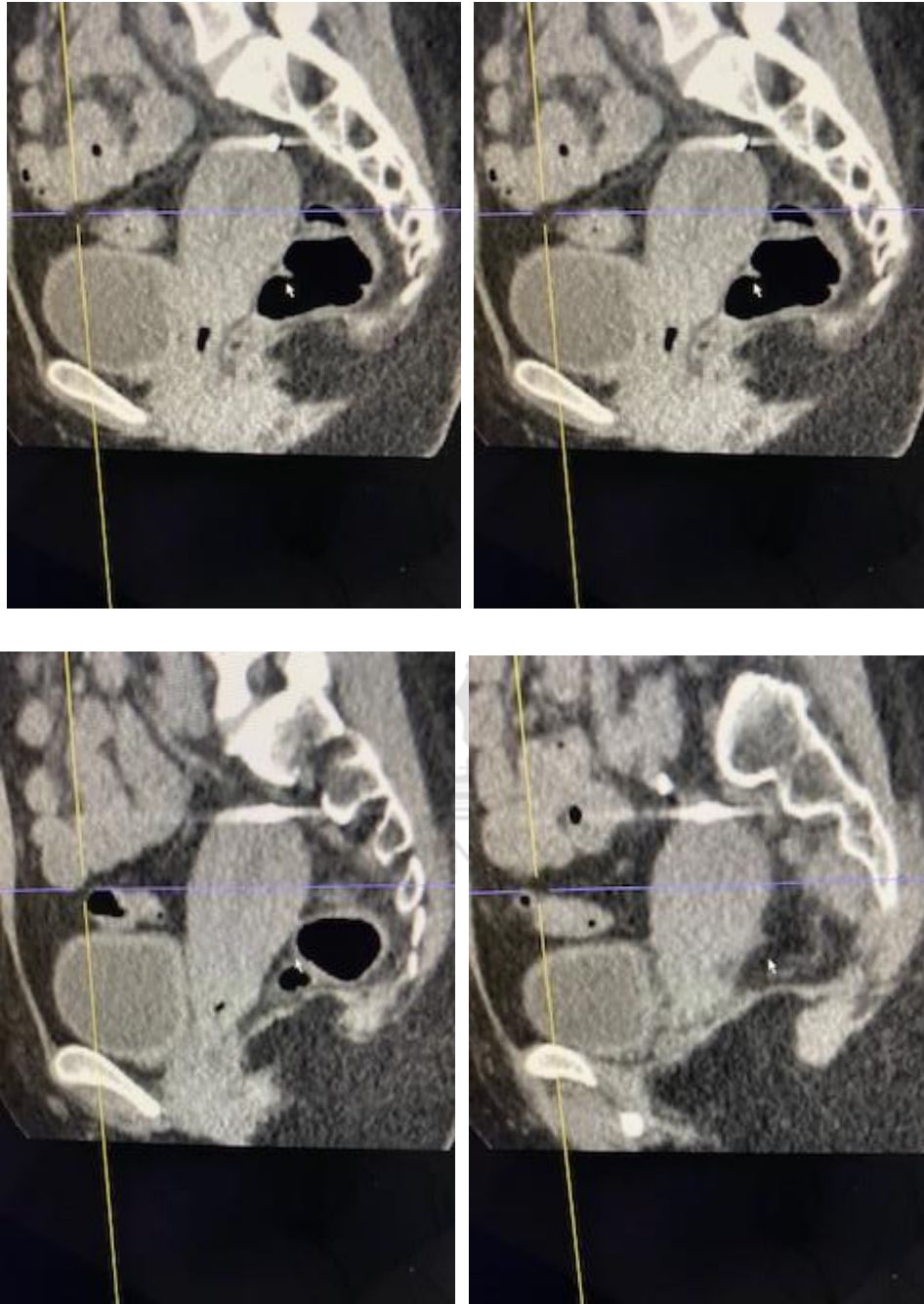


Fig- D: Sagittal CT scan

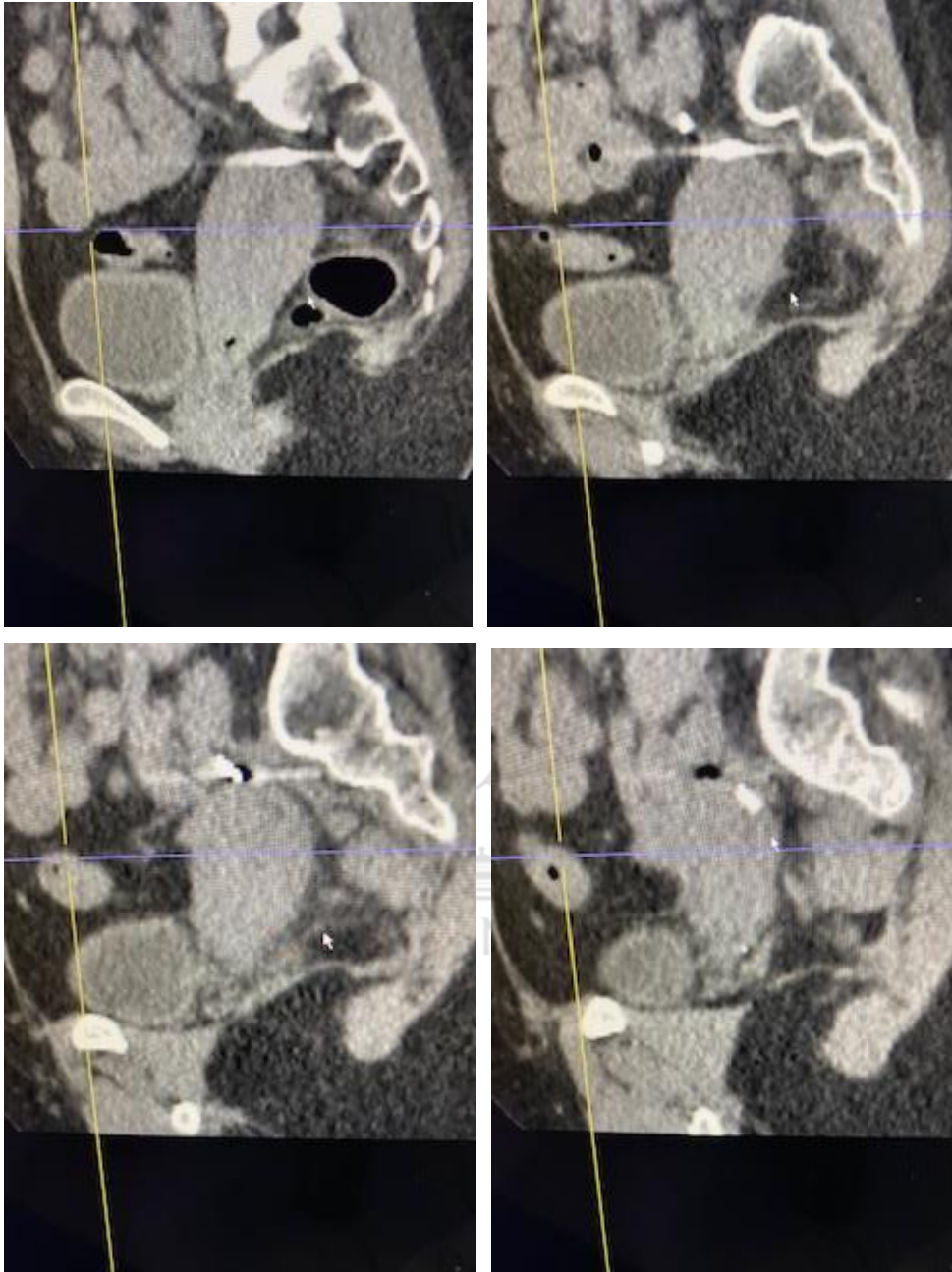


Fig- E: Sagittal CT scan

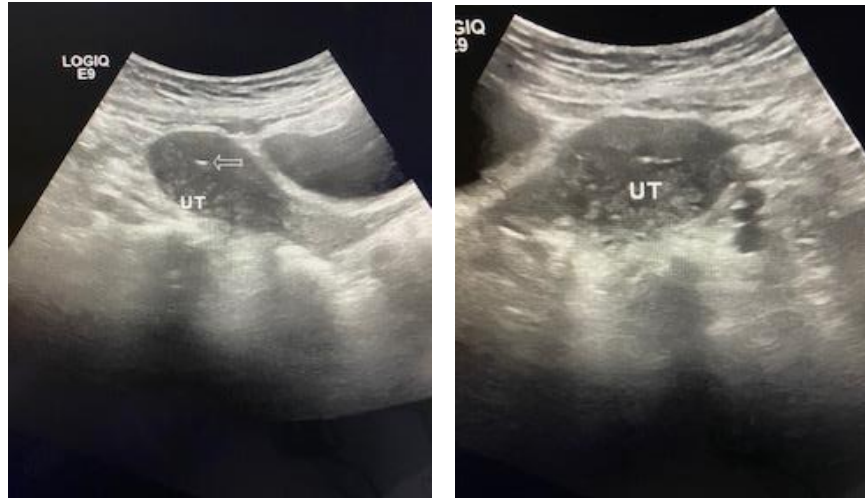


Fig-F: Ultrasound Scan of Pelvis

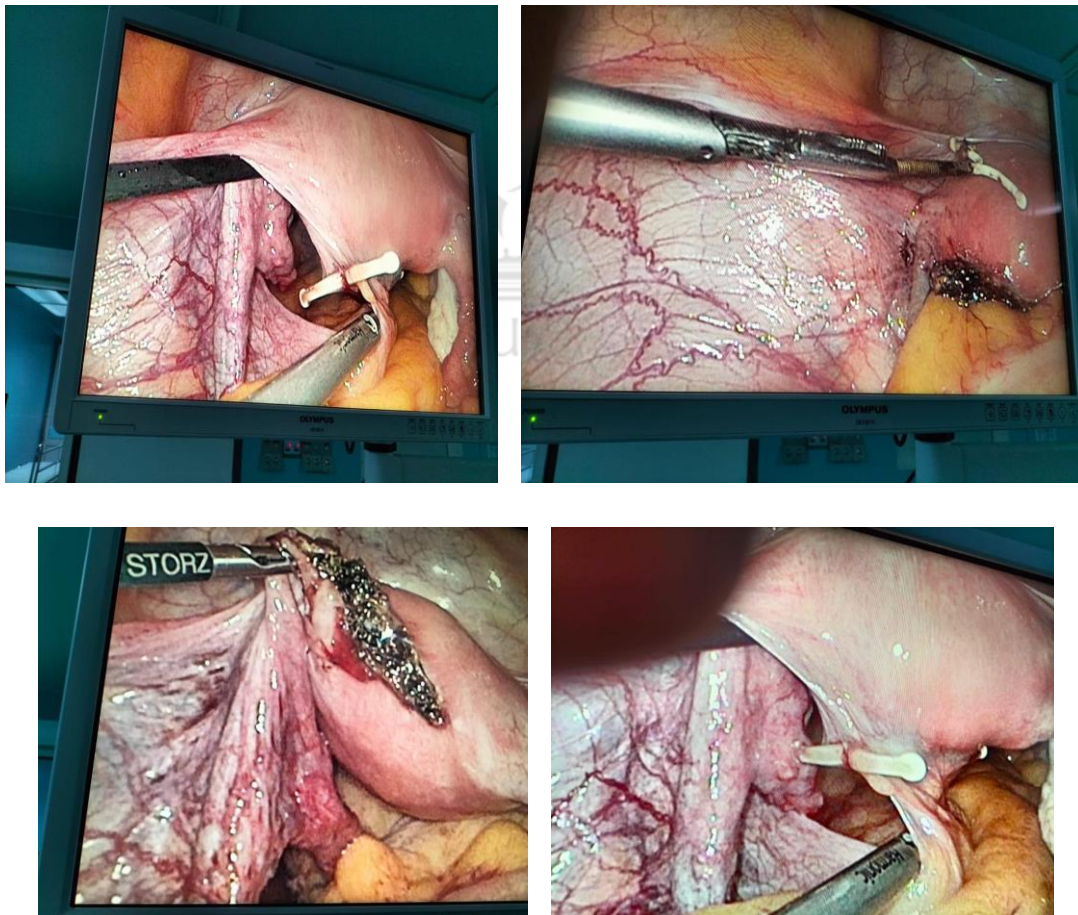


Fig-G: Peroperative photographs

DISCUSSION

Both copper and hormone-releasing IUCDs are currently available. The copper TCu-380A is T-shaped. Release copper ions, which both increase the local Two polyethylene monofilaments connected to the stem, referred to as retrieval strings, allow for detection and removal and approved for up to 10 years of use. The available hormone-releasing IUD release levonorgestral, a synthetic progesterone, leads to cervical mucosal thickening and suppression of the endometrium as well as the inhibition of ovulation in some women (9). It is approved for 5 years but has efficacy for at least 7 years (10).

Placement of IUDs is performed in an outpatient setting by using available kits and sterile techniques. A sterile uterine sound is used to ensure a minimum uterine depth of 6cm (11). Image guidance is generally reserved with a history of difficult insertion, obesity and suspected distorted uterine cavity (12). Follow up pelvic examination within 6 weeks of insertion to ensure visualization of the retrieval strings, which should protrude through the external cervical os by 2-3 cm.

The correctly positioned IUCD is located in the uterine cavity near the fundus (Fig-H).

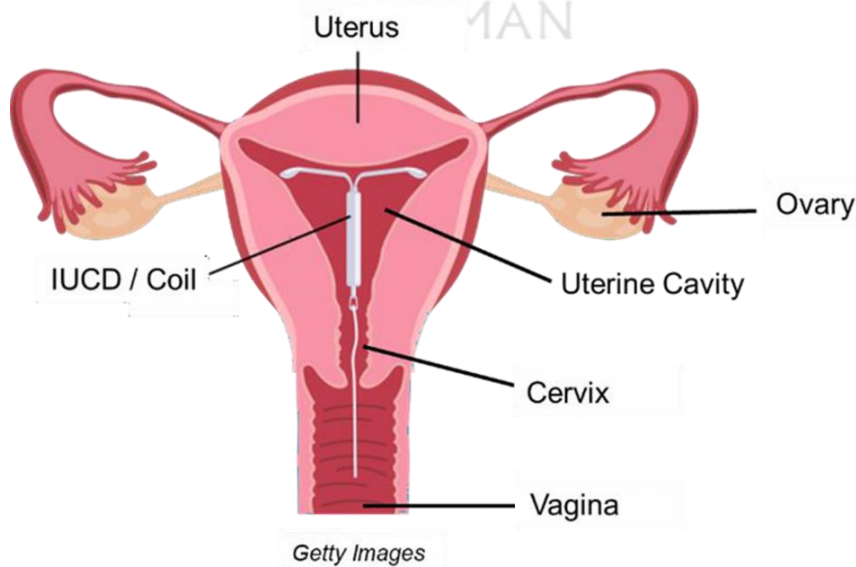


Fig: H: Correct position of IUCD

Ultrasonography is the most commonly used method for imaging of IUCD. Transvaginal or pelvic ultrasound is usually done. When the IUCD cannot be seen in ultrasonography abdominal X-rays, computed tomography (CT) or magnetic resonance imaging (MRI) may be helpful. Both copper and hormone-releasing devices are considered safe for 3-T MRI.

Malposition of IUCD occurs if the IUCD is not properly placed in the uterine cavity. IUCD can be expelled from uterine cavity through external cervical os. Displacement of IUCD may occur by rotation or inferior position in the lower uterine cavity or cervix. Embedment of IUCD, means penetration of myometrium without extension through the serosa. Possible perforation means penetration through both the myometrium and the serosa, partially and completely with migration into the intraperitoneal cavity.

The malposition of IUCD is a frequent complication. Malposition is more often associated with symptoms of pain, excess bleeding and can also be asymptomatic (13). It is suspected clinically when there is shortening, lengthening or absence of retrieval strings on pelvic exam (14). The expulsion is more common in first year of use and more in immediate post-partum placement after vaginal delivery (15), more common in hormone releasing IUCD, Mirena (16). Early pregnancy and ectopic pregnancy are sometimes found with displaced IUCDs. In perforated IUCDs adhesion can occur when there is a foreign body reaction in fallopian tube. Perforated IUCDs can cause bowel injury or abscess formation.

Rare complications like fragmentation and calcification can happen. Endometrial calcification or foetal bone fragments can mimic with IUCD.

Partially expelled and displaced IUCDs should be removed and replaced. Embedded and perforated IUCDs need to be hysteroscopic, sometimes combined with laparoscopy and laparotomy or surgery may be necessary for removal (16,17).

CONCLUSION

To avoid malposition and its related complications needs prior uterine cavity assessment. IUCDs insertion after termination of pregnancy and postpartum can be avoided by using alternative contraceptive methods to reduce the malposition of IUCDs. Ultrasonography, X-ray, CT imaging are helpful in confirming expulsion, assessing perforation, intraperitoneal migration and

complications like as abscesses or bowel injuries. Ultrasonography is also helpful in the management of complications such as contraceptive failure (pregnancy) and detection of fragmentation and calcification.

Conflict of interest: None.

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