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Misplaced Cu-T as a Cause of Recurrent Urinary Tract Infection - A Rare Case

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Case Report:

A 70 years old female para-10 (NVD) + 2 abortion, presented with pain in lower abdomen and dysuria.. All of her babies were delivered at home.Age of last child was 23 years.

All deliveries were conducted by traditional birth attendant except her last delivery which was conducted by trained birth attendant. She had been suffering from lower abdominal pain and dysuria for many years. But for last few years her pain was severe & intolerable especially during micturition. She also noticed haematuria for last 1 month prior to her admission. She visited local doctors & took medication for pain & urinary infection but her symptom did not improve. On examination her nutritional status was found average, vitals were stable. Regarding her abdominal examination, no organomegaly was detected. On per vaginal examination her vulva & vagina looked healthy, per speculum examination revealed cervix was normal, no discharge or thread was detected. !! report showed Hb%-11.9 gm/dl, ESR-50, TC-15,000, platelet count-250 lac, urine for routine & microscopic examination report showed pus cells - plenty, RBC -3-4/HPF but urine for C/S showed no growth. Her liver function test & renal function test & coagulation profile were normal. USG of whole abdomen revealed no abnormality.

USG OF KUB showed only features of cystitis. Post voidal residue was 20 cc.

CT scan of KUB showed normal finding, but Copper-T tube like structure noted in pelvic cavity abutting along anterior surface of uterus in between uterus & urinary bladder.

Then repeat USG of KUB showed that urinary bladder well filled but irregular in outline, wall was thickened (0.41 cm) with numerous floating low level internal echoes within urinary bladder. There was well-defined thin walled sonolucent area measuring about 2.17 cm x 0.86 cm having a broad neck was noted attached with the posterior right lateral basal wall of the urinary bladder. A calcified elongated highly echogenic intravesical lesion measuring about 3.24 cm x 0.48 cm casting distal acoustic shadow, was seen in the posterior right lateral basal wall of urinary bladder embodied into the muscular wall of the urinary bladder penetrating through the anterior fundal uterine wall.

There was no evidence of vesico-uterine fistula.

Decision was taken to do cystoscopy. Cystoscopy & Otis urethrectomy was done but failed to pull out the Cu-T due to dense adhesion & calcification with the bladder wall.

Finally mini-laparotomy was done.

Vertical stem of the Cu-T was found deeply embedded within the myometrium beneath the vesico-uterine pouch, which was detected after separation of vesical-uterine fold of peritoneum. One part of horizontal stem

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was inside the uterine wall & another stem penetrated the bladder wall through & through & string came out intra-peritoneally. Whole of the vertical limb was separated from uterine wall & then horizontal stem from uterus & bladder were easily removed. Uterine wall was closed in layers.

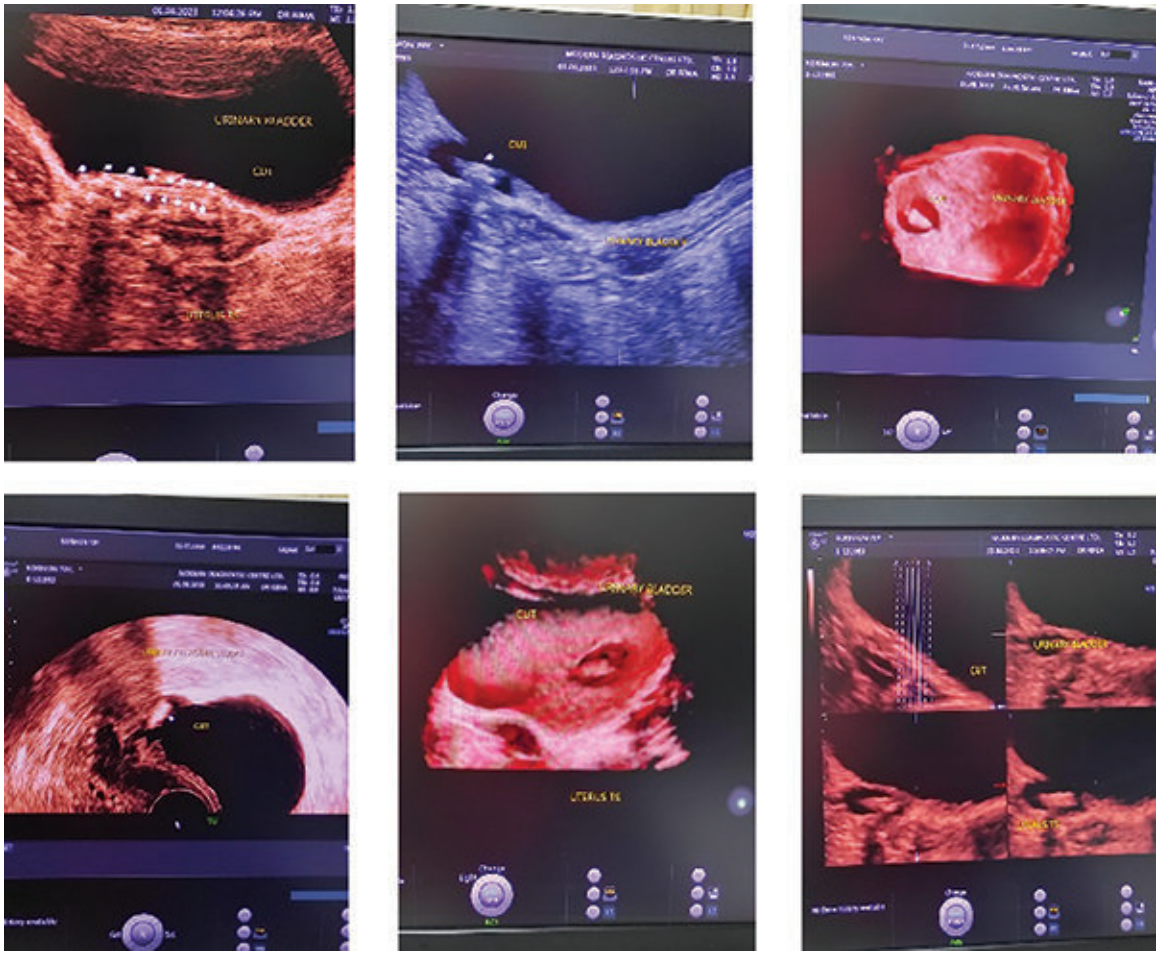

Figure 1: *USG picture*

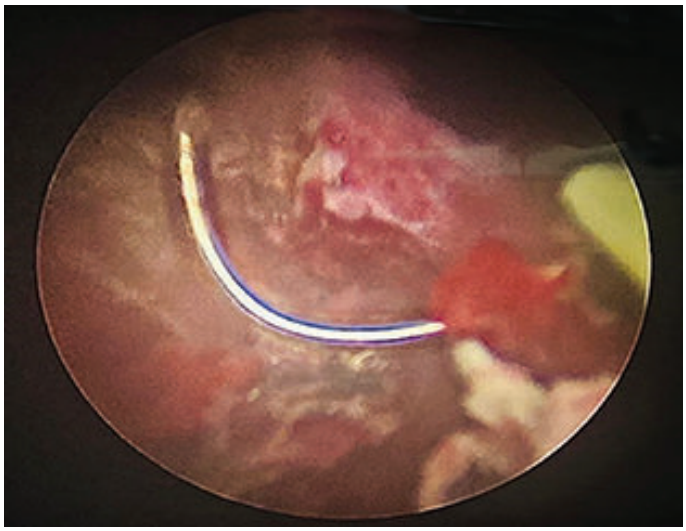

Figure 2: *Cystoscopy picture*

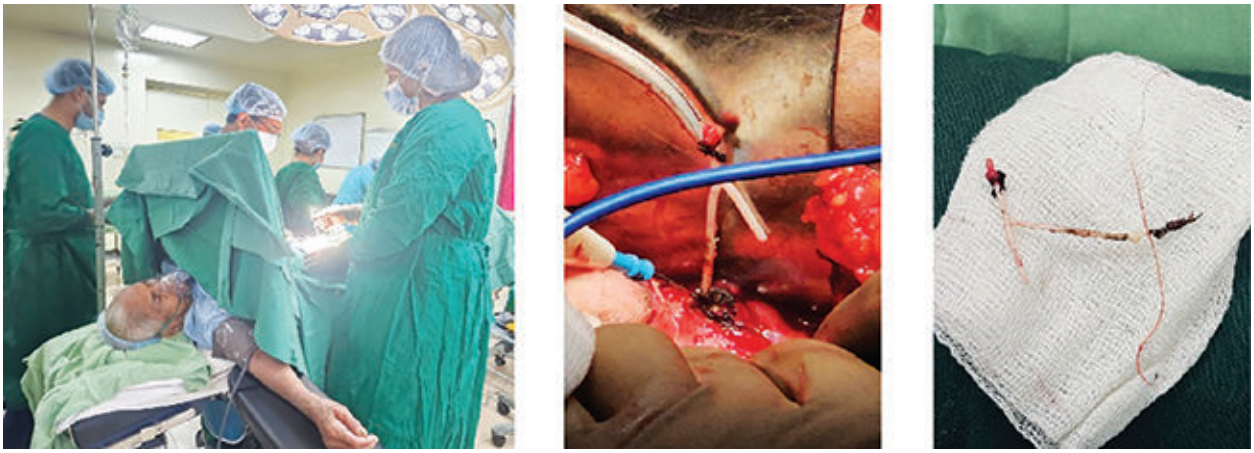

Figure 3: *Laparotomy pictures:*

Discussion:

IUCDs for contraception were first introduced by Richart in 1909 & were further developed by Grafenberg[1] in 1929; there was then a resurgence with the modern era beginning in 1959 when flexible plastic IUCDs were introduced. Over the years, there have been many design modifications to improve effectiveness, acceptability, and safety[2]. IUCDs are highly effective form of long acting reversible contraception[3].

Uterine perforation with IUCD was first described in the 1930st { u . Initially, there was denial of this happening at the time of insertion.

Uterine perforation following IUCD is rare and occur in 0.5 - 3/ 1000 insertions but it is a potential health risk. Primary uterine perforation occurs at the time of insertion mainly due to faulty techniques by unskilled person, soft uterine wall, uterine contraction during involution process, wrong measurement of uterocervical length. Secondary uterine perforation is silent. Some cases are not identified until months or years after insertionv { x .

Post insertion women should have follow-up visit accordingly. First visit should be at the end of first menstrual period or after 1 month whichever is earlier. Subsequently after 3 months and later once a year. An IUCD users should be instructed to visit a doctor in case of missing thread, if she and her partner can feel the lower end of IUCD, persistent lower abdominal pain, fever, dyspareunia, unusual vaginal discharge, when she misses periods. All migrated IUCD must be removed as it can enter the peritoneal cavity & can perforate the bowel & bladder & cause fistula formation.

In our case report Cu-T was inserted by a health provider at home after delivery of placenta. Patient did not go for any follow-up & came to know about migrated copper-T after 23 years of insertion when she started suffering from recurrent UTI & severe lower abdominal pain for many years. The interval that had elapsed between insertion & diagnosis was 23 yearsv { x .

Perforation typically occurs into the utero-rectal pouch with an anteverted uterus or in the vesicouterine pouch if uterus is retrovertedy . Most of the perforation go unnoticed at the time of insertion & is suspected due to persistent symptom of mild lower abdominal pain during follow up[1]p .

The most common symptoms leading to investigation of possible uterine perforation is the finding of missing Cu-T thread & chronic lower abdominal pain. TVS is a more precise investigation. However, sometimes ultrasound may fail to localize the IUCD & in such case X-ray abdomen & pelvis & CT scan are helpful[11].

Uterine perforation can be prevented by skilled insertion training for clinicians, use of plastic rather than metal sound, provision for less rigid transducer by device manufacturer, avoidance of insertion or taking extra care from 48 hours to 4 weeks postpartum[12].

Copper-T within the uterus may be removed by pulling it out by it's string & if the thread is missing Cu-T may be removed by D&C or hysteroscopy. If the Cu-T has migrated into the abdominal cavity minimally invasive surgery like laparoscopy approach is preferred but when the removal is more complicated then open laparotomy may be safe[13].

Coclusion:

Intrauterine contraceptive devices are simple, safe & cost effective & LARC (long acting reversible contraceptive). Although, an uncommon phenomenon,

uterine perforation with Cu-T is one important risk that must be explained to patients.

The aim of this case report is to raise awareness of the circumstances in which perforation of the uterus by IUCD can occur, the consequences of such perforation, and approach to the management of suspected or actual perforation.

IUCD very rarely leads to dangerous sequelae & it does not detract from the overall excellent safety record of IUCD[2]

Conflict of interest: No

Acknowledgement: We are thankful to the patient for their consent to report the case. Also, we thank the staffs who helped us manage the patients during the emergencies

Patients Consent:

We have obtained informed consent for the publication of the details relating to the patient in this report. All possible steps have been taken to safeguard the identity of the patient.

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