

Misplaced Cu-T In the Dome of Bladder: A Case Report

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Misplaced Copper T intrauterine devices (CuT) in the abdominal cavity are a rare but serious complication of IUD use. The incidence of transuterine perforation and migration of intrauterine contraceptive devices into the abdominal cavity has been estimated at less than 0.1% (Junnare et al., 2020). This case involves a 27-year-old female who developed abdominal pain four months after CuT insertion. Imaging revealed a displaced CuT, likely due to uterine perforation during insertion. The patient underwent exploratory laparotomy for removal of the device, found near the bladder dome. This case underscores the importance of proper insertion technique, post-insertion follow-up, and early intervention to prevent complications such as organ damage or infection. Regular training for healthcare providers is essential to minimize such risks.

Keywords: Copper T, IUCD insertion, misplaced copper T, Dome of bladder, uterine perforation.**Introduction**

A misplaced cut in the peritoneal cavity can lead to unintended damage to surrounding organs or tissues, potentially resulting in complications such as infection, bleeding, or peritonitis. The incidence of transuterine perforation and migration of intrauterine contraceptive devices into the abdominal cavity has been estimated at less than 0.1% (Junnare et al., 2020). A misplaced CuT (Copper T intrauterine device) in the abdominal cavity refers to an instance where the IUD, which is normally placed within the uterus to prevent pregnancy, has migrated outside the uterine cavity and into the abdominal cavity (Singhal et al., 2019). This is a rare but serious complication that may require medical intervention. The exact cause of Copper T displacement is not always clear, but some contributing factors may include improper insertion, expulsion, uterine perforation, and changes in the uterus. Improper insertion can occur if the device is not correctly positioned during the procedure, possibly due to faulty technique, incorrect placement, or the uterus' anatomy. Expulsion can happen when the IUD, initially in the correct position, is displaced over time due to uterine contractions, particularly after childbirth or a post-abortion procedure. Uterine perforation can also occur during insertion, especially if the cervix or uterus is not properly dilated or if excessive force is applied, causing the device to migrate into

the abdominal cavity. Our case is of a 27 years old female who reported to St George's hospital with complaints of pain in abdomen since 10 days who had Cu T insertion done 1 year back at a private hospital.

Case Details

A 27 yr female ,married since 2 yrs ,Para 1,Living 1, previous vaginal deliveries,last child birth 1 yr ago came to Gynaecology outpatient at St. George's Hospital, Mumbai with X RAY suggestive of misplaced Copper-T. Patient was apparently alright 10 days back when she experienced pain in abdomen.

On examination, her pulse rate was 86 beats/minute, her blood pressure was 120/80 mm of Hg. Mild pallor was present .On per abdominal examination,there was mild tenderness in the lower abdomen. A per speculum examination showed no presence of Copper-T thread,while on a bimanual per vaginal examination, the uterus was found to be normal in size, and the right fornix was slightly tender. On detailed questioning, the patient stated that she had got the Copper-T inserted 1 yr back at a private hospital. Since then patient has been experiencing no complaints since then pertaining to the Copper-T insertion.

As there was no Copper T thread seen on per speculum examination, in view of mild tenderness in the lower abdomen, Ultrasonography was done which was suggestive of— Linear hyperechoic structure anterior to the urinary bladder and posterior to the anterior abdominal wall suggestive of displaced Copper T.

CECT Abdomen and pelvis was done which was suggestive of Intraperitoneal displaced Copper T surrounding granulation tissue abutting small bowel loop and anterior bladder wall associated with hypodense non- enhancing area in the lower one -third anterior myometrial uterine wall {likely site of perforation}.

Patient was planned for exploratory laparotomy with minimally invasive incision. The Copper T was embedded in the urinary bladder wall with one end of the copper T seen projecting out of the urinary bladder wall and the other end seen at the dome of the bladder musculature while the string of the copper T was projecting out of the urinary bladder musculature in the lower abdominal and pelvic cavity. Only the ends of the Copper T

were visible while Copper T itself was in the urinary bladder musculature. There was abscess of around 4cm*3cm*3 cm along the horizontal arm of the embedded copper T in the bladder musculature. As the copper T was not in the cavity of urinary bladder it could not be retrieved by cystoscopy. Gently with meticulous dissection, the horizontal arm of the copper T was dissected from the bladder musculature and abscess of around 15 cc was drained. After removal of the Copper T, it was seen that the copper T arms were rusted. Suturing of the bladder wall was done using Polyglactin 2-0 in a double-layer fashion. After the suturing was complete, Methylene blue dye was pushed retrogradely to check for any leaks in the dome of the bladder, but no methylene blue was found in the cavity. Suture line was intact with no leakage of the dye. After taking the correct count of the mops and instruments, abdomen was closed in layers. Post operative period was uneventful. Patient was covered with injectable antibiotics post operatively. Foleys catheter was kept for 12 days after which the foleys was removed and patient passed urine post removal of foleys. Patient was vitally stable and symptomatically better and thus got discharged.



Figure 1: XRAY ABDOMEN AND PELVIS showing IUCD lodged on the pelvic wall



Figure 2: CT Scan showing misplaced IUCD in the pelvis

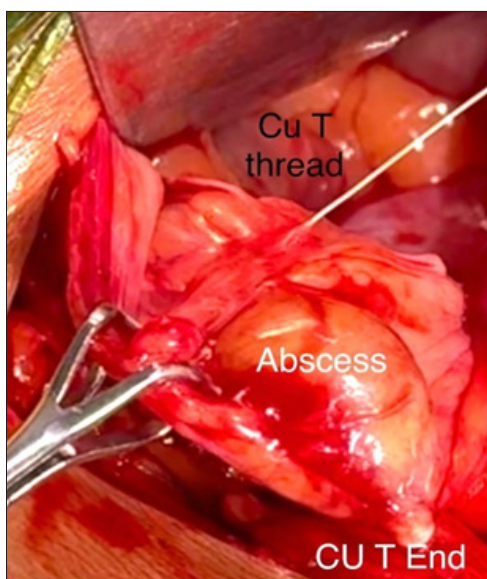


Figure 3: Intraoperative picture of copper T embedded in the wall of urinary bladder

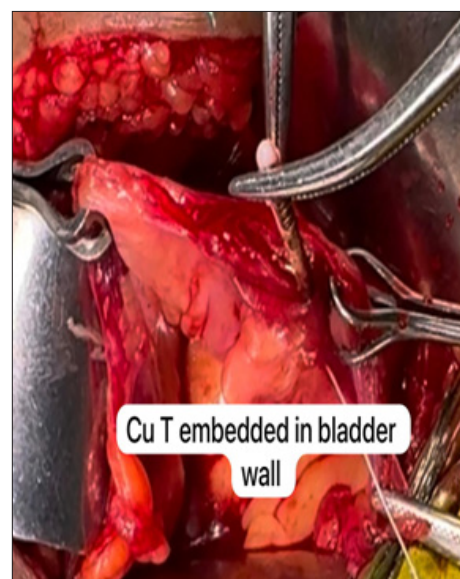


Figure 4: Intraoperative picture of copper T removal

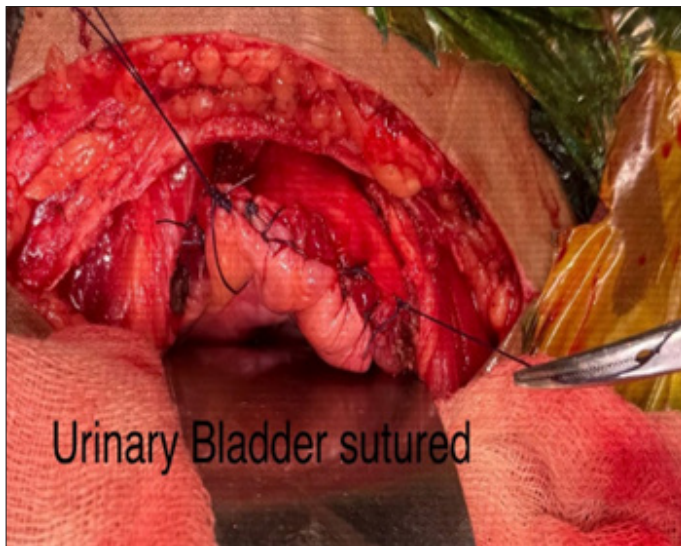


Figure 5: Postoperative picture after urinary bladder wall suturing and retrograde pushing of methylene blue showing no leakage of the dye in the pelvic cavity.



Figure 6: Rusted Copper T seen after its removal

Discussion

IUCD is an effective, safe and economic method of contraception and is used by 13.9% of the world's 1.16 billion women aged 15-49 years. 1. A misplaced CuT (Copper T intrauterine device) in the abdominal cavity refers to an instance where the IUD, which is normally placed within the uterus to prevent pregnancy, has migrated outside the uterine cavity and into the abdominal cavity. This is a rare but serious complication that may require medical intervention. Uterine perforation is an uncommon complication of intrauterine device insertion, with an incidence of 1 in 1000 insertion. Very rarely, a device may perforate into bowel or urinary tract. Because of close proximity of urinary bladder to the uterus, an IUCD in rare incidence can perforate or migrate into urinary bladder. There are more than 70 cases of perforation involving the urinary tract reported in literature (Bhatla & Soni, 2018). A similar case was reported Anupa Sehgal, Puneeta Mahajan in January 2019 at Babasaheb Ambedkar hospital, Delhi (Singhal et al., 2019). Most of the patients in these cases experienced urinary symptoms, and half of the reported cases resulted in stone formation around the IUCD (Strebel & Kuster, 2012). Bladder perforation should be considered whenever a patient with a "missing" IUCD presents with urinary symptoms. Risk factors for uterine perforation include clinician inexperience in IUCD placement, or immobile uterus, a retroverted uterus, and the presence of a myometrial defect (pre-existing or created during the procedure by uterine sound or IUCD inserter). Most of perforation occurs at the time of insertion (Barten & Henderson, 2015). Uterine perforation can often be asymptomatic and are not identified until months or years after insertion. Symptoms suggesting perforation include pain, cramping, irregular bleeding, dyspareunia, and absent string (Lopez & Bernholc, 2020). In the present case uterine perforation could have occurred at the time of insertion. Another important complication of IUCD insertion is expulsion and occurs in 3 to 10 percent of women. If the strings of IUCD are not visible, complete expulsion may have occurred. The diagnosis of complete expulsion requires ultrasound confirmation that the IUCD is not in the uterus,

followed by x-ray documentation that IUCD is not in the abdomen or pelvis. Expulsion cannot be diagnosed without x-ray documentation, unless the expulsion was noted by the user. It is usually impossible to detect an IUCD that is located outside the uterus with ultrasound. Ultrasound scanning is a better modality for identifying devices that are intrauterine rather than extrauterine. IUCD which has perforated or migrated into the urinary bladder must be removed even if it is asymptomatic. This is to prevent complications such as calculus formation and bladder rupture. An IUCD which has migrated into urinary bladder is treated by cystoscopic removal or by open suprapubic cystostomy. Cystoscopic removal is preferred because it has low morbidity and is highly effective (Waldman & Cammarata, 2019). But in this case cystoscopic removal was not required as it was not in the lumen of the bladder. Conclusion regular training of doctors and paramedics can prevent complications associated with insertion of IUCD. Post insertion follow-up visits are important and missing threads should be evaluated meticulously. Urinary complaints with not retrieved IUCD should raise suspicion of intravesical IUCD (Shadbolt & Vaidya, 2017).

Conclusion

Misplaced CuT in the abdominal cavity is a rare but potentially serious complication of intrauterine device use. Prompt diagnosis and appropriate intervention are crucial to prevent long-term health consequences. In case of any symptoms of IUD displacement or complications encountered, it is important to seek medical attention promptly. Regular training of doctors and paramedics can prevent complications associated with insertion of IUCD. Post insertion follow-up visits are important and missing threads should be evaluated meticulously. Urinary complaints with not retrieved IUCD should raise suspicion of intravesical IUCD.

Conflict of Interest

None.

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