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RESEARCH ARTICLE

MISPLACED COPPER T: A COMPREHENSIVE OVERVIEW

Dr. Mubashra Rafat Khan[1], Dr. Bhagyashree Patil[2] and Dr. Meenakshi Devarmani[3]

1. MRMC, Kalaburagi.
2. Associate Professor, MRMC, Kalaburagi.
3. Professor & Head of Department, MRMC, Kalaburagi.

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Abstract

Worldwide, the second most popular form of birth control is Cu T because it is a long term, reversible, highly effective and cost effective contraceptive. In an international study sponsored by the WHO, the average annual failure rate of Copper T was 0.4% or less. Uterine perforation is one of the most dreaded complications of Copper T insertion. The frequency of this occurrence is estimated to be between 0.05 and 13 per 1000 insertions (average, 1.2/1000) and appears to depend on the type of device placed, the skill of the operator, position of the uterus, and intensity of follow-up. A detailed study of case was done who were admitted in our hospital. Further imaging was done and patient were diagnosed with misplaced IUD. The misplaced IUD was removed under vision with hysteroscopy or laproscopy. Minimally invasive techniques like hysteroscopy and advanced laparoscopy are ideally suited to the diagnosis and surgical management of the perforated IUD.

Introduction:-

Worldwide, the second most popular form of birth control is Cu T because it is a long term, reversible, highly effective and cost effective contraceptive. In an international study sponsored by the WHO, the average annual failure rate of Copper T was 0.4% or less.[1]

Spontaneous expulsion is about 2-8 %. Some risk factors are nulliparity, heavy menstrual flow and insertion immediately postpartum or after second. Infection following IUCD insertion is 1% trimester abortion. Pregnancy with IUCD is a rare occurrence.[2]

Uterine perforation is one of the most dreaded complications of Copper T insertion. The frequency of this occurrence is estimated to be between 0.05 and 13 per 1000 insertions (average, 1.2/1000) and appears to depend on the type of device placed, the skill of the operator, position of the uterus, and intensity of follow-up.[34]

[1]Farouk K, Afridi ZD, Farooq MA, Qureshi IA. Urological complications of intrauterine contraceptive device. JPMI 2007;21:260-5.
[2]Dominik B, J Schneider (1997) Pregnancy and IUS.GeburtshilfeFrauenheilkd 57: 687-688.
[3]Osborne JL, Bennett MJ. Removal of intra-abdominal intrauterine contraceptive devices.Br J Obstet Gynecol. 1978;85:868–871

Corresponding Author:- Dr. Mubashra Rafat
Address:- MRMC, Kalaburagi.

A woman's fertility returns promptly after an IUCD is removed.

The recommended follow up schedule after IUCD insertion is first visit after the first menstrual period or after one month whichever is earlier. Subsequent visits after 3 months and thereafter once a year.

Risk of perforation is higher in case of post abortion or immediate postpartum.

Method:-

It was a retrospective case series report studied in a tertiary health care centre. All details were gathered from case sheets and intra-operatively. Patient characteristic including age, parity, chief complaints, duration of complaints, history of CuT insertion, history of insertion in the puerperium or interval was taken and studied. Further examination, investigation and intervention were also studied.

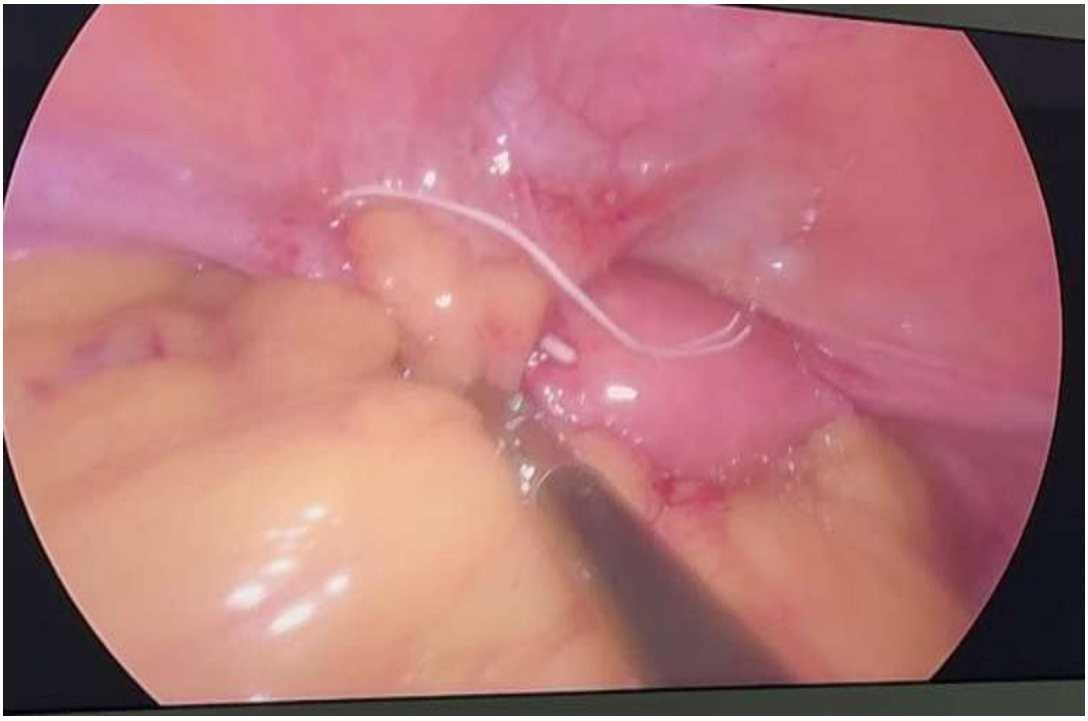
Results:-

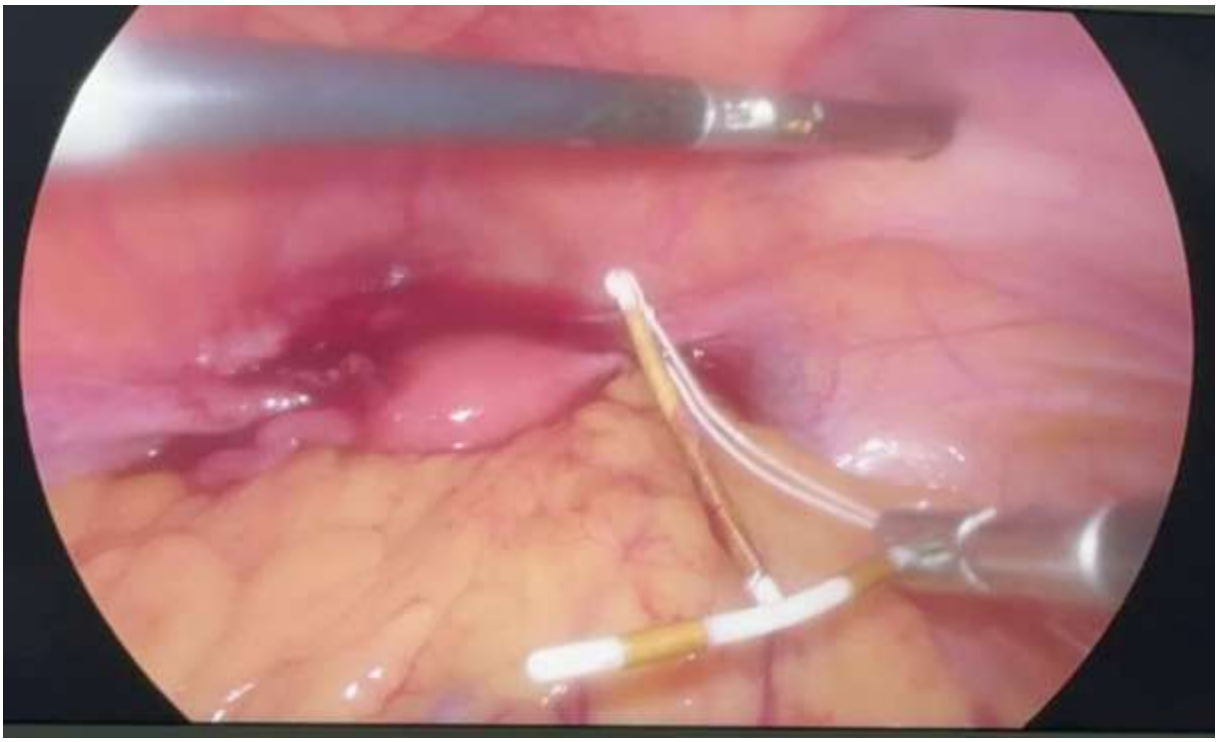
Case Report One:

A 24 year old P1L1 presented with complaints of lower abdominal pain after 1 week of Cu-T insertion in a private hospital. Patient had a full term normal vaginal delivery 3 months back. For contraception, she opted for IUCD insertion. She was in lactational amenorrhea. Patient was not given withdrawal bleeding. After insertion, in a week patient had complaints of lower abdominal pain. A ultrasonography was done and it showed IUCD placed anterior to uterus between uterus and urinary bladder. On CT abdomen, uterus appeared normal size with intrauterine contraceptive in situ. With the above reports, patient was referred to our hospital. Her general physical examination was unremarkable. On local examination, CuT thread was not visible. On TVS, uterus appeared normal size and empty. CuT could be identified in front of the anterior wall of uterus, possibly embedded in the posterior bladder wall.

[4]SØgaard K. Unrecognized perforations of the uterine and rectal walls by an intrauterine contraceptive device.ActaObstetGynecol Scand. 1993;72:55–56

The patient was taken to the operating theatre where diagnostic hysteroscopy failed to locate the IUD. Diagnostic laparoscopy was then undertaken, and the IUD thread was discovered on the broad ligament with clump of omentum over it. The omentum was separated and Cu T was visualized and then removed.

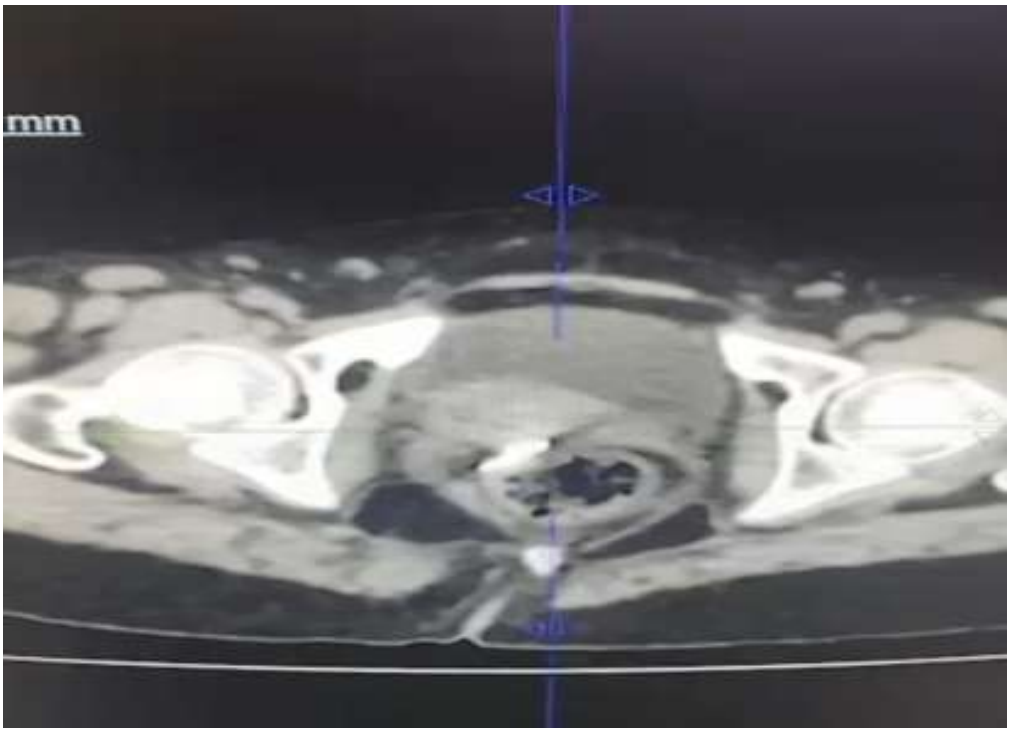




Cystoscopy done and revealed no bladder injury. Hysteroscopy done to confirm uterine integrity. The patient recovered without incident and discharged.

Case Report Two:
A 33 Year old P1D1A2 presented with lower abdominal pain to the gynecological out patient, She was experiencing the pain since six months, she was not aware of type of IUCD inserted. She had no complaints of abnormal vaginal bleeding or disturbance of bowel or bladder habits. On examination, systemic examination was unremarkable. On per speculum, Cu T thread was not visible and on per vaginal examination, mild uterine tenderness noted. Trans abdominal sonography showed endometrial perforation with no evidence of IUCD in the endometrial cavity. X ray imaging showed IUCD in the pelvic region.

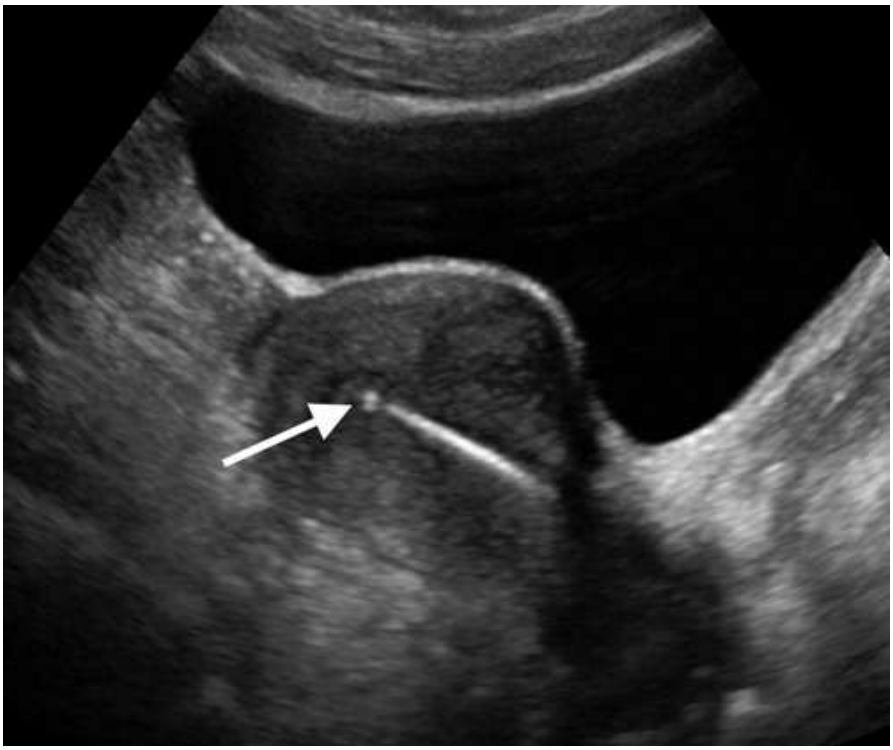
Non-Contrast Computed Tomography showed displaced intrauterine contraceptive device in recto-uterine pouch with possible uterine.



Patient was taken up for emergency laparoscopy, copper-t could not be identified in the uterine cavity and uterine perforation was seen in the fundus of uterus and the patient was taken up for explorative laparotomy on opening the abdomen, dense adhesions were present in the pouch of douglas, omentum was adherent to the posterior wall of uterus, copper-t was rolled up in the omentum in the pouch of douglas and it was found and removed. Postoperative recovery of the patient was uneventful.

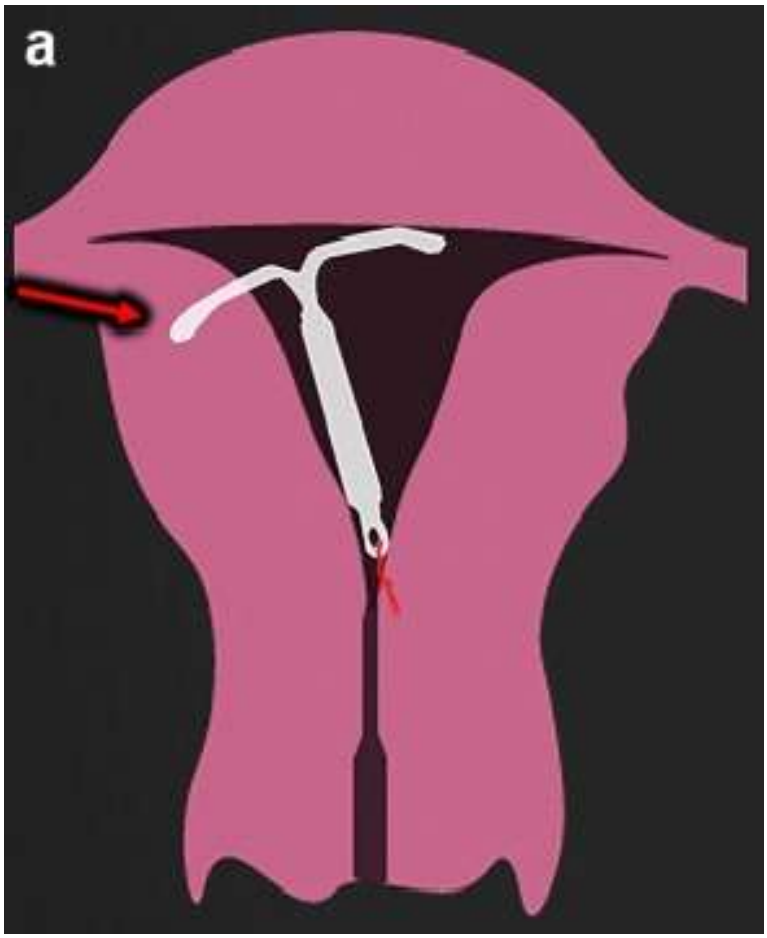
Case Report 3:

A 40 years old P2L2 came with complaints of per vaginal bleeding since 1 month, changing 1-2pads per day with no passage of clots. She was not able to feel the thread of CuT for the past 1 month. She had no complaints of pain abdomen. Intrauterine contraceptive device was inserted 3 years ago. On examination, her vitals were stable, per abdomen was soft non tender. Her per speculum examination failed to reveal any threads of the IUCD. An ultrasound revealed CuT embedded in the fundus with no perforation.



Patient was taken up for hysteroscopy where the location of IUCD was confirmed and it was removed with hook under vision. Patient withstood the procedure well. She was discharged on POD 2.

Case Report 4:
A 32 years old P4L4 came with complaints of missing copper T thread since 2 months. She had undergone CuT insertion 5 years back at government hospital, kalaburagi. No complaints of pain abdomen, bleeding per vagina. On examination, per abdomen soft and nontender. Her per speculum examination failed to reveal any threads of the IUCD. On ultrasound, CuT noted at the left cornua.



Patient was taken up for hysteroscopy, where the CuT was visualized and removed withCuT hook. Postoperative period was uneventful.

Case Report 5:
A 38 years old P6L5D1 came with complaints of white discharge since 2-3 months, foul smelling, soaking 2 pads per day and associated with lower backache. Patient gives the history of CuT insertion after her last child birth 6 years ago. She doesn't give history of CuT removal. She had no complaints of abnormal vaginal bleeding or disturbance of bowel or bladder habits. On examination, systemic examination was unremarkable. On per speculum, Cu T thread was not visible and foul smelling discharge was present and on per vaginal examination, mild uterine tenderness was noted. On ultrasound, CuT was visualized embedded in the anterior uterine wall. After 2 days of IV antibiotics, patient was taken up for hysteroscopic removal of CuT. Intraop, CuT hook was used to remove the embedded CuT under vision. Mininal bleeding followed the procedure. Patient was given 5 days of antibiotics and discharged.

Discussion:-

Initially asymptomatic, the majority of uterine perforations are believed to be committed at the time of IUD insertion[5]. IUD perforations can be either partial, where part of the device stays in the uterus, or complete, where the entire device moves into the abdominal cavity. While different systems have been created to classify the severity and location of IUD perforations, their practical usefulness in clinical settings is still uncertain.[6] Approximately 15% of uterine perforations caused by IUDs can extend to and damage surrounding pelvic and abdominal organs, such as the intestines, which are the most frequently affected.

In case of missing CuT situation, real-time transvaginal ultrasonography is the most appropriate initial diagnostic modality. If the IUD is seen within the uterus, and removal desired, this may be accomplished by using ultrasound guidance with regional anaesthesia. If unsuccessful, operative hysteroscopy should be undertaken.

Safe and effective IUD insertion relies on basic gynaecological skills, including assessing the uterus's size, shape, and position before placement, and securing the uterus in place during the procedure to ensure accurate positioning. Follow-up speculum examination one month after insertion to visualize the strings confirms proper placement and permits timely intervention, if perforation has occurred.

Minimally invasive techniques like hysteroscopy and advanced laparoscopy are ideally suited to the diagnosis and surgical management of the perforated IUD.

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[5]Zakin D, Stern WZ, Rosenblatt T. Complete and partial uterine perforation and embedding following insertion of intrauterine devices. I. Classification, complications, mechanism, incidence, and missing string. ObstetGynecolSurv. 1981;36:335–353

[6]Ansari AH.Diagnosis and management of intrauterine device with missing tail.Obstet Gynecol. 1974;44:727–734.