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## Tubo-Ovarian Mass with Misplaced Copper T.

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### ABSTRACT

Tubo-ovarian abscess is an inflammatory mass involving the fallopian tube, ovary, or adjacent pelvic organs. When there is an agglutination of these structures, it is called a tubo-ovarian complex. Intrauterine contraceptive devices (IUCD) are a safe and effective form of contraception used worldwide. Ultrasound and contrast CT whole abdomen revealed the presence of misplaced copper T in the peritoneal cavity with uterine perforation and left tubo-ovarian mass.

**Keywords:** Tubo-Ovarian, Copper-T, fallopian tube, ovary.

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## INTRODUCTION

Intrauterine contraceptive devices (IUCD) are safe and effective form of contraception used worldwide. IUCD is the second most common, safe and most effective method used for family planning after female sterilization. In developing countries it is the most popular reversible method of long term contraception due to easy availability and low cost. Although it is relatively safe, it is associated with heavy bleeding, irregular bleeding, infection and rarely it can lead on to uterine perforation extrauterine migration of copper-T. Mostly, it is a chronic form of migration to nearby structure. Here we report a case of misplaced copper T with TOA.

### Pathogenesis

TOA can be classified as either primary or secondary. The most widely accepted cause of a primary TOA is thought to be a result of an ascending infection from the lower genital tract. This infection, thought to be secondary to either sexually transmitted organisms or endogenous flora, ascends to the fallopian tube and causes an inflammatory response. Pus accumulates causing pyosalpingitis that extends to the ovary. A TOA may also result from local spread of infection from the appendix, bowel, bladder, or in association with a pelvic malignancy, this process is labeled a secondary TOA. While TOA was once more commonly associated with being life-threatening, advancements in antibiotics and surgical techniques have resulted in a near absent mortality. However, failure to recognize it can result in irreversible tubal and ovarian damage, chronic pelvic pain, adhesion formation, ectopic pregnancy, and abscess rupture.

### Risk

The risks for TOA can be separated into PID-related and non-PID-related. The PID-related risks include the following: multiple sexual partners, age between 15-25, history of prior PID, and having an IUD in place. However, not all TOAs are associated with PID. TOA may also arise as a post-operative complication, therefore look for history of pelvic/abdominal surgery and ovarian manipulation as seen with in vitro fertilization. Patients with chronic inflammatory process of the bowel e.g. Crohn's disease and ulcerative colitis, and even diverticulitis

### Case Report

Mrs XX, 38 year old, married for 20 years, para 2, live 2, both full term normal vaginal delivery, last child birth 11 years back, on cu T since 11 year, was presented with chief complaints of pain in the lower abdomen which was mild to moderate in intensity and accompanied by fever (100 o F). Her menstrual history was regular. No other contributory family or past history was available.

She underwent some investigations and diagnosed right ovarian mass then laproscopic right side salphingectomy, right side partial oophorectomy with appendicetomy done 1, 1/2 year.

On examination, she was comfortable and not sick looking. She had mild fever but the general physical examination was normal. Abdominal examination revealed a mildly tender suprapubic mass extending upto midway between pubic symphysis and umbilicus. There was no ascites. Per speculum examination copper T thread was not visualized, same mass could be felt on pelvic examination which was firm in consistency, slightly tender and was filling the entire pelvis. These mass were felt on both sides of a 10-12 week sized uterus.

Ultrasound examination confirmed the presence of uterus 7.4\*3.2\*4.5 with misplaced intrauterine contraception device noted in myometrium, right ovary shows a cyst 4\*3cm, left ovary not seen a cystic lesion with septation 11.7\*6 in the left parametrium, right side renal calculus about 6mm. She had mild polymorphonuclear leucocytosis. Her blood biochemistry was normal. She was started on broad spectrum antibiotics. CT-whole abdomen done to confirm the size and position of right side renal calculus, confirm the presence of IUD was migrated with one arm in the uterus myometrium and other arm seen outside the uterus in the pelvis with uterine perforation, large multiloculated cystic lesion 9.7\*5.4\*7.06 in left adnexal and pouch of Douglas displacing the uterus to the right side, right ovary normal, right kidney 5mm calculi in the upper

pole. Thensignofperitonitis was present . one course of antibiotic given followed by total hysterectomy with bilateral oophorectomy done.. Postoperative period was uneventful; patient was dischargedon 7<sup>th</sup> day.

### DISCUSSION

Perforation of the uterus by an IUCD was first described in 1930 by Murphy and Andrews independently. The incidence of perforation is 0.1 to 3 per 1000 insertions. Uterine perforation almost always occurs during insertion of IUCD and its incidence is related to the timing of insertion, type of device, the anatomy of the uterus and cervix, and most importantly the skill and experience of the person performing the insertion and also faulty insertion technique, soft uterine wall, recent pregnancy, abortion and previous uterine scar.

Secondary perforation can occur by slow migration through the muscular wall of the uterus which can be augmented by spontaneous uterine contractions and urinary bladder contractions. Migrated IUCD remain unnoticed for long and may not be discovered until it is found to be missing. All migrated IUCDs must be removed. An IUCD in peritoneal cavity can cause bowel perforation, bowel obstruction and fistula formation. Perforation of bowel can lead to peritonitis and stricture. Presentation of symptoms of bowel perforation can take upto 6 months to 16 years to occur.

Sonography with transvaginal and transabdominal approaches is a useful method to detect IUCD migration. In some cases computed tomography is needed for diagnosis.

Patients was hemodynamically stable, premenopausal, and abscess with CU T present with uterine perforation with sign of peritonitis so total abdominal hysterectomy with bilateral oophorectomy done .Antibiotic one course was given to cover the target N. gonorrhoea, C. trachomatis, and anaerobes.

Surgical intervention should be strongly considered in patients with suspected TOA rupture, sepsis presumed to be secondary to the TOA and post-menopausal women with TOA. All patients should be admitted to monitor response to antibiotics, as failure to respond to treatment within 48-72 hrs is an indication for drainage or surgical intervention.

### CONCLUSION

Every case of a missing IUCD, even with presence of pregnancy must be investigated carefully for uterine perforation. The possibility of IUCD migration into other intra-abdominal organs is always possible. Prevention of perforation can be avoided by correct insertion by experienced person, regular follow up after insertion. If any symptoms of perforation occurs, ultrasound or pelvic radiography should be done. special care should be taken in certain patient populations, i.e. the sexually inactive, pre-menarche and post-menopausal, to elucidate the cause of the TOA. As mentioned earlier, the post-menopausal patient should be evaluated for possible malignancy

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