

Missing Intrauterine Device Copper-T: Case Series

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ABSTRACT

An intrauterine contraceptive device (IUD) is a long acting, highly effective, economic and reversible method of contraception used worldwide. The most used devices are copper IUD (Copper-T) or Progesterone IUD. Common complications include failed insertion, pain, vasovagal reactions, infection, menstrual abnormalities, expulsion and rarely uterine embedment and perforation. In this case series we will discuss three cases of missing Copper-T. In one case Copper T was inserted at our hospital and in the other cases it was inserted in the periphery and all the cases was managed surgically with different modality.

Keywords: Copper-T; Intrauterine device; laparoscopy; laparotomy; perforation.

INTRODUCTION

Intrauterine device for contraception was first introduced by Richter in 1909 which was further developed and deployed.¹ It is highly effective in preventing pregnancy but like other method of contraception it has side effects which maybe serious, such as ectopic pregnancy, pelvic inflammatory disease, pain, increase in blood loss leading to anemia and uterine perforation.² Although uterine perforation is a potentially serious complication of Copper-T, it is uncommon and is often asymptomatic.¹

CASE 1

A 41 year, P2L2A1 lady, had Copper-T inserted after induced abortion of 8 weeks of gestation without any difficulty, which spontaneously expelled after 2 month of insertion. She then after 1 year presented to OPD for regular gynecological checkup. Her physical examination was unremarkable. Copper-T was again inserted as per her choice but this time insertion was difficult as internal cervical os was closed. After dilatation of cervix with Hegar's dilator Copper-T was placed. Again after one week she presented with the complains of per vaginal spotting which subsided after 4 days of Copper-T insertion but she still had mild dull aching lower abdominal pain. On examination the thread of her Copper-T was visualized at the external cervical os, she was prescribed analgesic and was sent home but again she presented after 2 days as pain did not subside, this time upon examination thread of her Copper-T was not visualized. Pelvic ultrasonography was done which suggested a dislodged Copper-T, the tip which was noted at left cornua extending to left adnexa. Patient was

admitted and diagnostic hysteroscopy was performed on the next day which failed to locate Copper-T. Mini laparotomy was done as patient underwent bilateral tubal ligation as well. Copper T was discovered in abdominal cavity outside uterus and minimal laceration was noted in left ovary and posterior aspect of uterus near left cornua. Copper-T was retrieved. Patient's recovery was uneventful and she was discharged three days after her surgery.

CASE 2

A 25 year, P2L2 lady had Copper-T placed without difficulty 12 weeks after uncomplicated vaginal delivery in Dang. After week of insertion of Copper-T she started having mild dull aching lower abdominal pain, after 1 month of which she visited her physician. On examination thread of her IUD (Copper-T) was not visualized. Pelvic ultrasonography was done which showed displacement of the Copper-T, which could be within the cornua or uterine wall. Pelvic x-ray was also done which also suggested the same. She visited hospital in Nepalgunj where physician tried to retrieve Copper-T by dilatation and curettage and with Copper-T hook but were unable to retrieve and then she visited our hospital. Pelvic ultrasonography was again repeated to reconfirm the Copper-T position. The ultrasonography suggested displaced Copper-T in right adnexa adjacent to right ovary. The patient was admitted and planned for diagnostic hysteroscopy, which failed to locate the Copper-T. Diagnostic laparoscopy was then undertaken and the Copper-T found in the abdominal cavity in right POD with minimal adhesion between uterine fundus and

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large intestine which was finally was retrieved. Post-operative period of the patient was uneventful and she was discharged after two days.



Figure 1. X- ray pelvis showing intrauterine device (Copper -T).

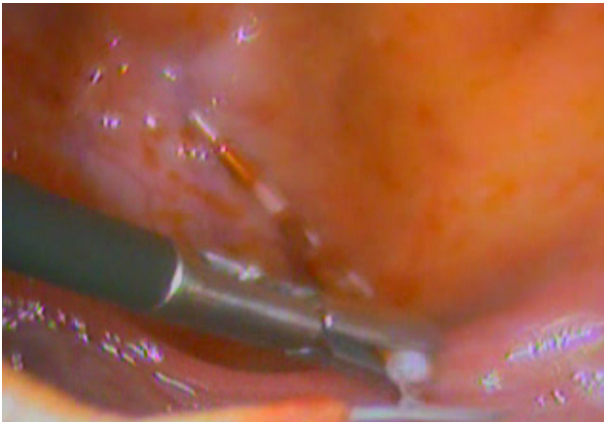


Figure 2. Copper -T successfully retrieved laparoscopically.

CASE 3

A 45 years, P2L2 lady presented to our hospital for removal of missing arm of copper- T. She had her Copper-T inserted 12 years ago. Since she had completed her family she wanted to adopt permanent method of family planning she went to clinic for its removal. Copper- T was removed in clinic but one arm of copper-T was missing and ultrasonography was done which showed one arm of copper-T in situ. Following this she was referred to our center where dilatation and curettage and diagnostic hysteroscopy were done but these procedures could not locate the missing arm. It was then removed laparoscopically.

DISCUSSION

Perforation of the uterus with Copper-T is an uncommon phenomenon. Although perforations that occur do not cause long term harm in most of the cases but women are advised to go through surgical removal that has some

risk. Harm associated with perforation may be loss of the IUD's contraceptive effect resulting in unplanned and unwanted pregnancy and also sometimes perforation leading to trauma to internal structure and adhesions.¹

Esposito et al³ postulated two mechanisms of uterine perforation namely: immediate traumatic perforation and later secondary perforation caused by gradual erosion through myometrium. Uterine perforation are described as partial perforation in which IUD penetrates only the myometrium and complete perforation in which device passes through all uterine layers and lie freely in the peritoneum.⁴

Risk factors for perforations include insertion by less experienced clinicians, postpartum insertion (<6 months since delivery), higher number of previous abortions and lactation.⁵

Perforation typically occurs into the uterorectal pouch with an anteverted uterus or in the vesicouterine pouch if uterus is retroverted.⁴ Perforation can occur with the sound, with the device itself or both, if the sound or the inserter passes further than normally expected then perforation should be suspected and the procedure abandoned.⁴ Most of the perforation go unnoticed at the time of insertion and is suspected due to persistent symptom of mild lower abdominal pain during follow ups.¹

The most common symptoms leading to investigation of possible uterine perforation is the finding of missing Copper-T thread and persistent lower abdominal pain. The diagnosis of perforation and localization of the device is made by ultrasound scanning and is more precise using transvaginal scanning than transabdominal scanning. However sometimes ultrasound may fail to localize the device and in such case X-ray abdomen and pelvis with some radiopaque maker in uterine cavity and CT scan are helpful.¹

Uterine perforation can be prevented by skilled insertion training for clinician, insertion by experienced clinicians, use of plastic rather than metal sound, provision for less rigid introducer by device manufacturer, avoidance of insertion or taking extra care from 48 hours to 4 weeks postpartum.¹

Copper-T within the uterus may be removed by pulling it out by its string and if the strings are missing Copper-T may be removed by dilatation and curettage or hysteroscopy. In cases where the device has migrated outside the endometrial cavity or intra abdominally several techniques has been used, minimally invasive laparoscopic removal is the preferred surgical technique but when the removal is more complicated open laparotomy may be safe.¹

CONCLUSIONS

Intra uterine devices are simple, safe and cost effective, long acting contraceptives. Although an uncommon phenomenon, uterine perforation with Copper-T is one important risk that must be explained to patients. Most cases are due to traumatic perforation that occurs at the time of insertion. Most perforations are uncomplicated with the device lying in a quiescent state in abdomen but once the perforation is diagnosed the device should be removed as it can cause visceral perforation, fistula formation and other complications. The displaced device can be removed by laparoscopy and sometimes by laparotomy.

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