

Intrauterine Pregnancy with Copper Intrauterine Contraceptive Device in situ: A Case Report.

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Abstract

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ABSTRACT

Intrauterine pregnancy on the background of intrauterine devices heralds its rare but possible failure. Despite having an excellent contraceptive pearl index, clients with copper-T may present with typical pregnancy symptoms. We present a case of a 22 year primigravida who after 42 months of successful use of copper-T, conceived an intrauterine pregnancy diagnosed at 7 weeks period of gestation. After a thorough explanation about possibility of viable pregnancy and also its pros and cons, she decided to terminate the pregnancy. Manual vacuum aspiration was done with removal of copper-T. Term pregnancies with excellent prognosis have been demonstrated in many studies after removal of intrauterine devices. Close follow up is needed to identify misplaced copper-T and keep unwanted pregnancy at bay.

Keywords: *copper-T; hysteroscopy; intrauterine copper devices; manual vacuum aspiration; pregnancy.*

INTRODUCTION

Intrauterine contraceptive devices are reversible contraceptives. Their contraception is remarkable yet its failure rate may lead to unwanted pregnancy.¹ Hormone (Levonorgestrel) loaded IUD shows par less failure rate than copper-T alone. The continuation of pregnancy is possible by safe removal of intrauterine devices (IUDs) by office hysteroscopy, yet challenges of preterm labor and inflammation of placenta can be troublesome. In resource poor settings, termination of pregnancy by manual vacuum aspiration is frequently practiced despite office hysteroscopy under ultrasound guidance being a better alternative.^{2, 3}

CASE REPORT

A 22-year female, from London, United Kingdom, had been using the intrauterine contraceptive device (IUCD) i.e. Copper T-380 A for 42 months. She was on her vacation to Kathmandu when she developed increasing intermittent episodes of lower abdominal pain for 3 weeks and hence presented to Gynecology and obstetrics out-patient-department (OPD) with additional complaints of cessation of menstruation for 2 months. She recalled that her menstrual periods otherwise were regular and elaborates that the lower abdominal pain was gradually progressing, cramping intermittently in nature, non-radiating with no known aggravating or relieving factors but was associated with episodes of nausea.

She had her urine pregnancy test (UPT) done at home using the pregnancy test kit 1 day before the OPD presentation which was positive. She recalls no history of fever, vomiting, Per Vaginal (PV) spotting or bleeding, or foul-smelling discharges in the past 2 months. The patient had no significant co-morbidities and no relevant medical, surgical, allergy, or psychosocial history. Her vitals were within normal limits and systemic examination of CardioPulmonary, Central nervous system, GastroIntestinal and GenitoUrinary systems were also within normal limits.

An urgent transabdominal ultrasound of the abdomen and pelvis was planned which revealed a gravid uterus containing a single gestational sac corresponding to 7 weeks and 0 days of gestation. The yolk sac was visualized but the fetal pole was not yet visualized. IUCD was seen in the endometrial cavity and the long arm of the IUD was positioned superiorly in the uterine cavity (Figure 1).

Figure 1: Long arm of Copper T (arrowhead) visualized inside endometrial cavity above gestational sac

After comprehensive patient counseling about the possibility of continuing pregnancy after IUD removal and the possible complications, our patient decided to terminate the pregnancy. Manual vacuum aspiration (MVA) for termination of pregnancy with the removal of Copper T was planned the following day. For 24 hours, she was in conservative management for intermittent pain.

In the operating room, with adequate monitoring, MVA was performed under intravenous anesthesia (IVA) under aseptic conditions. MVA cannula of size 4 and 6 was used and the product of conception (about 25-30 ml) along with the Copper T was removed. There was minimal blood loss and no other complications were observed.

During her 24 hours of hospital stay, postoperatively, she was managed conservatively. She was able to tolerate sips of liquid 2 hours after the surgery and resumed her normal diet the same day. She had no complications after surgery and was discharged home the next day. Following her follow-up on the 5th day she had no complaints.

DISCUSSION:

Intrauterine device (IUD) is one of the most frequently used contraceptive methods worldwide, and the pregnancy rate of the intrauterine device as a contraceptive method is around 1-2 pregnancies per 100 women-years (Pearl Index: Copper Spiral 0.9-3.0 failure/10 years, LNG-IUS 52 mg 0.16 failure/10 years, Gynefix 0-2.5 failures/10 years).¹ Amongst Copper containing IUDs, the T-shaped models with a surface

area of 380 mm² of copper have the lowest failure rates i.e. a one-year failure rate of 0.8% and a cumulative 12-year failure rate of 2.2%. The models with less surface area of copper have higher failure rates.⁴

IUDs are more effective in preventing unintended pregnancies than contraceptive pills, patches, and rings. It's worthwhile to clarify that ectopic pregnancies are less common when using contraception with an intrauterine contraceptive device than without contraception.

LNG-IUS and copper-bearing IUDs are long-acting reversible contraceptives (LARC) imparting high contraceptive effectiveness. Heinemann, et al performed a multinational, prospective, non-interventional cohort study of new users of LNG IUS (releasing 20 mcg LNG daily) and copper IUDs to measure the rate of unintended pregnancies in a typical population of IUD users which concluded that the contraceptive failure rate was low with both IUDs. Comparatively the LNG IUS resulted in significantly lower risk of pregnancy, including ectopic pregnancy, than the copper IUDs.⁵

Despite being excellent contraception, such failure rates may lead to a substantial number of unwanted pregnancies and subsequently induced abortions. Typical pregnancy symptoms occur during pregnancies with the IUDs. Importance of counseling about the risk of pregnancy before insertion is necessary.

Options are available to continue a pregnancy with or without IUDs. A retrospective cohort study including 12297 pregnancies, of which 196 had an IUD, concluded that pregnant women with an IUD are at very high risk for adverse pregnancy outcomes i.e. late miscarriage, preterm delivery, vaginal bleeding, clinical chorioamnionitis, and placental abruption than those without an IUD.⁶ The likely reason are the high prevalence of intra-amniotic infection and placental inflammatory lesions prevalent in pregnancies with an IUD. As our patient was properly counseled on the pros and cons of continuing the pregnancy, she chose not to.

Provided the IUD is in a favorable location, the removal of an IUD is recommended in the early weeks of pregnancy i.e. 9th -11th gestational week.¹ Meanwhile an early removal of an IUD decreases the risk of above mentioned adverse pregnancy outcomes.

Amongst various method to terminate pregnancy, World Health Organization (WHO) discourages use of dilatation and sharp curettage (D&C) due to possibility of Asherman's syndrome. A randomized control trial concluded that manual vacuum aspiration (MVA) has safety and efficacy similar to those of conventional methods such as D&C and Electronic Vacuum Aspiration (EVA).² Meanwhile, a prospective interventional study concluded that retrieval of IUCDs with missing strings with MVA is a novel method and can be an initial approach in low resource settings like ours.⁷

Continuing pregnancy after removal of IUDs has shown promising results of full-term pregnancy with good maternal and fetal outcomes. A case series of Twenty-six patients retrospectively evaluated procedural and pregnancy-related outcomes where participants underwent saline hysteroscopy with or without concurrent ultrasound guidance for retrieval of a retained IUD in early pregnancy. This study concluded that saline hysteroscopy is a safe and effective method for retrieval of a retained IUD in early pregnancy. And concurrent ultrasound guidance can facilitate IUD localization.⁸

Whilst lost IUDs can be troublesome, for pregnant women without any apparent complications, office hysteroscopy promises to be a safe alternative option and as means to remove a lost IUD during the 1st trimester of pregnancy. It is considered the gold standard procedure for uterine cavity assessment as it provides direct visualization/biopsy and concurrent treatment of intracavitary pathology, IUCDs as foreign body in our case.⁷

CONCLUSION

Intrauterine pregnancy with a CU-T 380 A is rather uncommon. The possibility of continuing pregnancy after removal of IUDs is promising despite possible complications. MVA or office hysteroscopy technique avoid possible management.

Conflict of interest: None.

Consent: Written informed consent was obtained from the patient to publish this report in accordance with the journal’s patient consent policy.

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