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Case Report

Intrauterine device is embraced by the placenta

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ABSTRACT

The intrauterine device (IUD) is a contraceptive method which are tiny, T-shaped plastic, that is placed within the uterus and left there, is used all throughout the world with more than 99% effectiveness rate. Pregnancy with a levonorgestrel-releasing intrauterine system (LNG-IUS) *in situ* is very rare. Intracavitary pregnancy with an IUD can lead to a higher risk of infection and preterm birth. We described a case of a live birth with an IUD inserted into the placenta. A 27-year-old Syrian woman in G4P3 with a history of healthy vaginal deliveries arrived in our delivery room at 39+3 weeks gestation complaining of labor pain. A vaginal examination revealed bulging membranes and a fully dilated cervix. She delivered a live baby boy, weighing 3100 g and being sent to the nursery with an APGAR score of 9 to 10. When the placenta was examined, a white foreign object that was embedded there was discovered to be an intrauterine device. Although intrauterine pregnancy is a potential problem that must be taken into account, ectopic pregnancy is a reasonably common complication of intrauterine contraceptive devices. Although several studies have shown that term pregnancies with excellent prognoses can occur after the removal of intrauterine devices, close monitoring is necessary to detect misplaced copper-T and prevent undesired births.

Keywords: LNG-IUS, Copper IUD, Pregnancy, Hysteroscopy, Dilatation, Curettage

INTRODUCTION

IUDs, which are tiny, T-shaped plastic contraceptives that are placed within the uterus and left there, are used for contraception all throughout the world. The hormonal IUD and the copper IUD are the two different types of IUDs.¹

Despite the high contraceptive efficiency, pregnancy can still occur. The failure rate of the intrauterine device as a contraceptive method is around 1-2 pregnancies per 100 women's year.¹ Unexpected pregnancy after IUD insertion is possible, with a rate within the first year of IUD implantation of 0.8% for copper IUD and 0.2% for levonorgestrel IUD.² Pregnancy with an LNG-IUS *in situ*

is very rare. An essential factor in developing a pregnancy under a non-hormonal IUD is luxation of the device. IUD removal is encouraged when pregnancy has been confirmed, it is simple when IUD threads are visible on pelvic exam.² Clinically, managing pregnancies with a retained IUD is challenging.

Women who become pregnant with an intrauterine device have an increased risk of undesirable obstetric consequences.

IUD use increases the risk of chorioamnionitis, late miscarriage, preterm delivery, placental abruption and vaginal bleeding during pregnancy.³

The risk of pregnancies with retained IUD is higher compared to the early removal of IUD.⁹

Synopsis

The synopsis was the presentation of an IUD case that was unintentionally embedded in the placenta following a normal vaginal birth of a term baby.

CASE REPORT

A 27-year-old Syrian woman in G4P3 with a history of healthy vaginal deliveries arrived in our delivery room at 39+3 weeks gestation complaining of labor pain. At 29 weeks gestation, the patient was referred to our outpatient department for pelvic ultrasound due to her polyhydramnios-complicated pregnancy. Other than a straightforward UTI that was treated with PO antibiotics, all of her prenatal investigations were within the usual range. She also experienced vulvar irritation and sporadic discharge with a terrible smell. A single intrauterine pregnancy and polyhydramnios with an AFI of 27 cm were detected during a 29-week ultrasound.

When the patient arrived at the delivery ward, she was evaluated and examined; her vital signs were normal. A vaginal examination revealed bulging membranes and a fully dilated cervix. After AROM, the patient was ready for a typical vaginal birth, and she delivered a live baby boy, weighing 3100 g and being sent to the nursery with an APGAR score of 9 to 10.

The third stage of labor went without a hitch, and the placenta was fully delivered. When the placenta was examined, a white foreign object that was embedded there was discovered to be an intrauterine device (Figure 1 a and b). The patient stated that the IUD was implanted five years prior and that neither her follow-up pelvic exam nor obstetrical US exam revealed it.

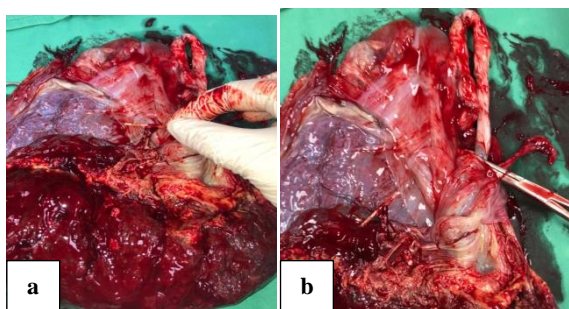


Figure 1 (a and b): The placenta was examined; IUD was embedded inside the placenta white arrow.

DISCUSSION

IUD is one of the most frequently used contraceptive methods worldwide, and the pregnancy rate of the IUD 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, 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 The most popular reversible method of birth control used globally is the IUD, which is also the most successful method with a failure rate equivalent to permanent sterilization.^{4,11,12} Table 1 illustrates the failure rates IUDs compared with other methods of contraception. It is worthwhile to clarify that ectopic pregnancies are less common when using contraception with an intrauterine contraceptive device than without contraception.^{11,12}

An essential factor in developing a pregnancy under a non-hormonal IUD is luxation of the device, which specially occurs during the first year after the device placement, subsequently frequent check-ups is crucial during this time frame.^{4,5}

The benefits and drawbacks of IUD removal should be discussed with pregnant women who have hem, although doing so can be difficult for medical professionals working in clinical settings.

IUD removal when it is visible may result in an abortion, but retaining this device in the uterus increases the chance of PROM and preterm labor, according to research by Karaçor et al.⁷

In a retrospective COHORT study involving 196 IUD-using patients, Kim et al came to the conclusion that IUD-using pregnancies had greater rates of late miscarriage, premature delivery, vaginal hemorrhage, clinical chorioamnionitis, and placental abruption than pregnancies without IUD.³

The rate of microbial invasion was higher when amniocentesis was performed, along with the rate of intraamniotic infection brought on by candida species.

Additionally, patients with IUDs had a greater rate of chorioamnionitis and/or funisitis histologically.³

IUD removal during the first trimester of pregnancy was advised by Brahmi et al in a systematic review of the pregnancy outcome with an IUD that revealed an increased risk of pregnancy difficulties, but this will not eliminate the risks.⁸

We draw the conclusion that an IUD should be removed as early in the pregnancy as possible, preferably between 9 and 11 weeks of gestation to reduce the risk of miscarriage, based on a case report of an IUD-containing pregnancy that was 9+3 weeks old when IUD was removed using saline infusion hysteroscopy and grasping forceps, and a term baby was successfully delivered.⁹

Alperen et al conducted a study on the management of problems and side effects of intrauterine contraception. One of these issues is pregnancy with an IUD. They advise IUD removal as soon as possible in cases of planned pregnancy and if IUD threads are visible. They also emphasized the lack of information on how to handle cases of pregnancy with an IUD without visible threads (IUD retention). They talked about the benefits of hysteroscopic IUD removal, particularly when the IUD was in the distal segment or was not near the intrauterine gestational sac.^{4,6,7,10,14}

Table 1: Failure rates of various contraceptive methods.

S. No.	Contraceptive methods	Failure rate (per 100 episodes of use)
1.	Implants	0.6
2.	Intrauterine device (IUDs)	1.4
3.	Injectable contraceptives	1.7
4.	Oral contraceptive pills	5.5
5.	Male condoms	5.4
6.	Withdrawal method	13.4
7.	Periodic abstinence	13

CONCLUSION

The decision of whether to remove or preserve the device in the event that the IUD is still inside the uterus but there are no externally visible threads is a contentious one, and there is not enough information to establish the best course of action. In some circumstances, including in our situation, using an IUD can result in a smooth pregnancy and delivery; the IUD may act as a filter that allows pregnancy to reach term. The prospect of keeping a contracted IUD throughout pregnancy versus removing it as soon as possible needs further study.

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