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Intrauterine Pregnancy with Copper Intrauterine Contraceptive Device in situ: A case report

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BACKGROUND

Intrauterine devices (IUD) provide highly effective forms of contraception and it is rare for an intrauterine pregnancy to occur with IUD in situ.

CASE

A 33-year-old para 2 after 44 months of successful use of a copper intrauterine device conceived an intrauterine pregnancy diagnosed at 7 weeks. Due to failure to visualise IUD strings, the IUD was left in situ after extensive counselling. The patient was admitted at 32 weeks after an unprovoked antepartum haemorrhage. A kleihauer test was negative and obstetric ultrasound at 32+4 weeks gestation showed a cephalic, biophysically well fetus with estimated fetal weight on the 58th centile, an anterior placenta clear of the cervical os, marginal cord insertion, and the IUD noted in situ.

A week later, the patient experienced premature prelabour rupture of membranes (PPROM) and threatened pre-term labour. She received two doses of steroids. Labour was induced at 33+6 weeks due to recurrent antepartum haemorrhage and a live female infant was delivered. Birthweight was 2410g (83rd centile) with Apgar scores of 8 at 1 minute and 8 at 5 minutes. The IUD was found to be embedded on the edge of the placenta. The patient declined placental histopathology.

The infant was admitted to the neonatal intensive care unit at 11 minutes of age. She was treated for hypoglycemia of 2.1 on admission with intravenous dextrose boluses and subsequent blood sugar levels remained stable. She was diagnosed with transient tachypnoea of the newborn and managed with CPAP from 33 minutes until 4 hours of life. The infant also had jaundice responsive to phototherapy treatment. The maximum serum bilirubin level was 144 micromol/litre and a Coombes test was negative. Empirical intravenous antibiotics were used due to risk of sepsis. Blood cultures remained negative. She was transferred from the neonatal intensive care unit on day 5 of life and remained in hospital for ongoing feed establishment until discharge at day 12 of life.

DISCUSSION

Pregnancies with IUD in situ have an increased risk of adverse events. Whilst early IUD removal can improve outcomes, it is not without risk or possible in all cases.

Studies have shown IUD in situ increases risk of PPROM, with a retrospective cohort study (n=12,297) quoting an adjusted odds ratio of 9.4% (95% CI)[2]. Other adverse outcomes demonstrated in literature include higher risk for miscarriage, pre-term birth, septic abortion, and chorioamnionitis compared with the general obstetric population[3], with a combined risk of adverse events reaching up to 63.3% [4]. Likely reasons include high prevalence of intra amniotic infection and placental inflammatory lesions in pregnancies with an IUD.

Hysteroscopy with or without ultrasound guidance can be an option for retrieval of retained IUD. Whilst the miscarriage rate in the first three weeks post procedure can be higher than normal pregnancies, studies show the risk of adverse pregnancy events approached that of the general obstetric population as the pregnancy progresses[5].

Clinicians should be aware of risks associated with continuing pregnancies with IUDs in situ and risks of IUD removal to appropriately counsel patients.

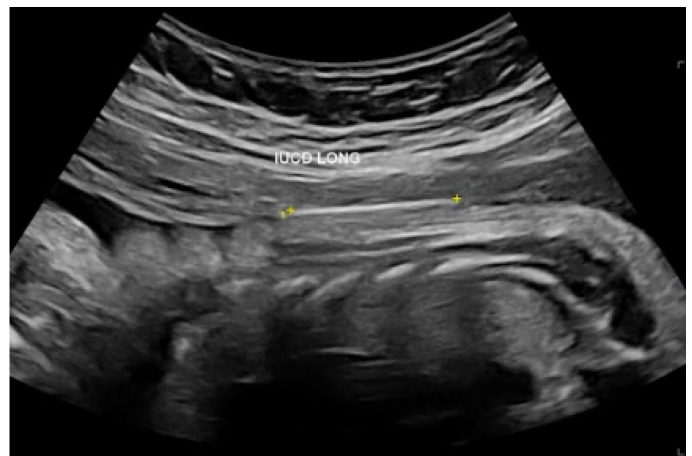

Figure 1. Obstetric ultrasound at 32+4 weeks; IUD in transverse plane can be visualized

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