Pregnancy in a non-communicating rudimentary horn:

An interesting case report

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Introduction

Pregnancy in the rudimentary uterine horn is extremely rare and usually terminates in rupture during first or second trimester with fetal demise. It can be missed on routine scans and requires a high index of suspicion. We report a case of unruptured rudimentary horn pregnancy at 20 weeks, misdiagnosed as intrauterine pregnancy in a bicornuate uterus, with attempted termination for fetal demise.

Case Report

A 19-year-old Caucasian, primigravida, known to have surgically corrected congenital lumbar meningocoele, congenital talipes and a bicornuate uterus, had two unsuccessful attempts of medical and surgical termination of pregnancy at 7+4 weeks. She then changed her mind and decided to continue her pregnancy. Dating scan at 10+ weeks confirmed a live intrauterine pregnancy in one uterine horn of bicornuate uterus. (Figure 1)

Figure 1: 10/40 gestation

Mid-T scan at 18-weeks was otherwise normal, but suggested features of small for gestational age. So, she underwent scan at the regional fetal medicine unit, followed by amniocentesis, which showed normal karyotype. At 20+4 weeks, she presented with unprovoked vaginal bleeding. Ultrasound scan confirmed an intrauterine fetal demise.

Case Report

She was counselled for termination of pregnancy by medical management. However, no products of conception were passed after 24 hours of first cycle of misoprostol regime. She had two further cycles of misoprostol regime, with no success. It was day 5, as an inpatient by now. Extensive discussion with several senior consultants, led to options of Gemeprost pessary, extra-amniotic prostaglandin infusions and hysterotomy as the last resort. Site of pregnancy was also questioned. Urgent pelvic MRI was requested with high index of suspicion of an abdominal pregnancy. MRI showed a single cervix communicating to a left-sided non-gravid uterine horn without any connection to the right-sided gravid uterine horn. (Figure 2 & 3)

A laparotomy was then arranged, which confirmed a unicontralateral uterus with a right rudimentary non-communicating, unruptured gravid horn. The fetus with intact sac was removed from the rudimentary horn by hysterotomy. (Figure 4)

Figure 4: Laparotomy findings

Post-operative recovery was uneventful. Follow up in the gynaecology clinic with further pelvic MRI scan was arranged in three months time. Unfortunately the lady never turned to follow up in spite of repeated recalls.

Discussion

Rudimentary horn with a unicorne uterus results from incomplete fusion of the Mullerian ducts. In 85% of cases, the rudimentary horn is non-communicating with the uterine cavity. Pregnancy can occur due to trans peritoneal migration of sperm or fertilised ovum. Pregnancy in a rudimentary horn has been reported to be in 1:76,000 to 1:150000 pregnancies. In most cases, the pregnancy lasts longer than in tubal pregnancy because of the variable musculature constitution in the thickness and distensibility of the wall of the rudimentary horn.

It is easy to miss this condition both clinically and by USS. Bicornuate uterus, interstitial pregnancy and abdominal pregnancy are common sonographic misdiagnoses. Evaluation of renal system is advised because of high incidence of urological anomalies. The usual outcome of rudimentary horn pregnancy is rupture in second trimester in 90% of cases with fetal demise, however cases of pregnancy progressing to the third trimester and resulting in a live birth after caesarean section have been reported as well. The traditional management is laparotomy and surgical removal of the pregnant horn to prevent rupture & recurrence. The fallopian tube on the side of the rudimentary horn must be removed in order to avoid tubal pregnancies. There are now other modern techniques for the management of rudimentary horn pregnancy like laparoscopic resection or medical treatment with methotrexate.

Conclusion

Non-communicating rudimentary uterine horn pregnancy is a rare entity associated with life threatening consequences. Early diagnosis and early interventions will avoid maternal morbidity and mortality. Ultrasound (USS) is less sensitive, while Magnetic resonance imaging (MRI) is a useful noninvasive tool to detect uterine anomalies in gravid/nongravid uterus.