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Case Report

Unruptured pregnancy in a right non-communicating rudimentary horn mimicking an adnexal ectopic pregnancy: a rare case report at 12 weeks

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ABSTRACT

Pregnancy in a non-communicating rudimentary horn is a very rare form of ectopic pregnancy associated with Müllerian duct abnormality. The rudimentary horn has limited distensibility and carries a high risk of rupture and catastrophic intra-abdominal haemorrhage, while early diagnosis may be difficult because it can mimic a tubal ectopic pregnancy. A 28-year-old unbooked gravida 2 para 1 living 0 woman with 12 weeks of amenorrhoea presented with lower abdominal pain and vaginal bleeding for 2–3 days. Ultrasound suggested an approximately 12-week unruptured right adnexal ectopic pregnancy with absent fetal cardiac activity. Emergency exploratory laparotomy revealed an intact pregnancy in a right non-communicating rudimentary horn of a unicornuate uterus. The rudimentary horn and ipsilateral fallopian tube were excised after evacuation of the products of conception. The postoperative course was uneventful, and the patient was asymptomatic at six-week follow-up. This case highlights the diagnostic challenge of rudimentary horn pregnancy and the importance of early recognition and timely surgical management before rupture.

Keywords: Unruptured pregnancy, Non-communicating rudimentary horn, Ectopic pregnancy

INTRODUCTION

Pregnancy in a rudimentary horn is one of the rarest forms of ectopic pregnancy and occurs in about one in 76,000 to 150,000 pregnancies. This is due to implantation in a rudimentary horn of a unicornuate uterus, a congenital anomaly of the Müllerian ducts. Fertilization is thought to occur through transperitoneal migration of sperm or the fertilized ovum.[1,2]

Rupture occurs in approximately 80–90% of cases because of the poor musculature and limited distensibility of the rudimentary horn and usually occurs between 10 and 20 weeks of gestation, causing massive intraperitoneal haemorrhage.[2,3] Preoperative diagnosis remains difficult because ultrasonography may misdiagnose the condition as a tubal ectopic pregnancy or a pregnancy in one horn of a bicornuate uterus.[2,4] We report a rare case of an unruptured 12-week pregnancy in a right non-communicating rudimentary horn diagnosed intraoperatively and managed successfully prior to rupture.[1,2]

CASE REPORT

A 28-year-old unbooked gravida 2 para 1 living 0 woman referred from District Women Hospital, Ghaziabad with provisional diagnosis of right ectopic pregnancy. Her last menstrual period was 24 December 2025, which is approximately 12 weeks gestation. She had a regular menses prior to conception.

She had a lower segment cesarean section 5 years ago for non-progression of labour. The child died of respiratory

distress syndrome at 10 months of age. No history of infertility, pelvic inflammatory disease, previous ectopic pregnancy or assisted reproductive technology.

She presented with complaints of lower abdominal pain and bleeding per vaginum for 2-3 days. The pain was mild, non-radiating and localized to the right iliac fossa. No history of syncope, vomiting, shoulder tip pain or urinary complaints was noted.

On examination, the patient was conscious, alert and hemodynamically stable. Pulse rate, blood pressure, respiratory rate and temperature were within normal limits. There was no paleness. On examination of the abdomen, there was a healed Pfannenstiel scar and mild tenderness over the right lower abdomen without guarding or rigidity. On speculum examination, the cervix appeared healthy with minimal vaginal bleeding. On bimanual examination a firm, mildly tender right adnexal mass approximately 10 × 8 cm was palpated. The mass could not be separately palpated from the uterus. The left fornix was free of tenderness.

Routine laboratory investigations showed a hemoglobin of 11.5 g/dl, a total leukocyte count of 6,400/mm³, and a platelet count of 1.83 × 10^5/mm³. Blood group - B positive and Urine pregnancy test was positive. Ultrasound revealed a right-sided unruptured ectopic pregnancy of approximately 12 weeks gestation (crown-rump length 54 mm) with no fetal cardiac activity (Figure 1). The uterus was empty and a provisional diagnosis of right adnexal ectopic pregnancy was made. Informed written consent was obtained and emergency exploratory laparotomy was performed under spinal anesthesia.

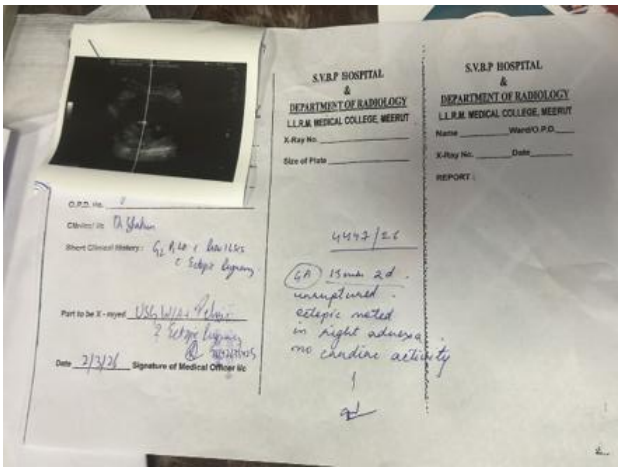

Figure 1: Preoperative ultrasonography demonstrating a right-sided ectopic gestation corresponding to approximately 12 weeks with absent fetal cardiac activity.

Intraoperative findings revealed a unicornuate uterus with a severely distended right non-communicating rudimentary horn with an intact 12-week pregnancy (Figure 2). The rudimentary horn was intact. right fallopian tube developed from the rudimentary horn and was normal. Both ovaries and contralateral fallopian tube were normal. There was no hemoperitoneum. The rudimentary horn and ipsilateral fallopian tube were excised after evacuation of products of conception (Figure 3 and 4). Estimated blood loss was 300-400 ml and meticulous hemostasis was achieved.

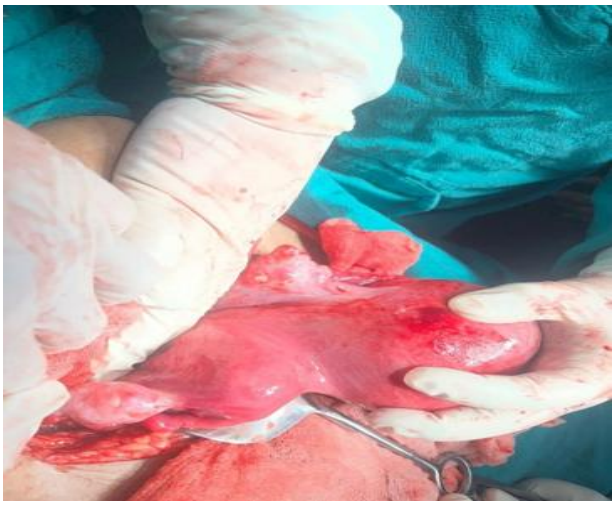

Figure 2: Intraoperative photograph showing a unicornuate uterus with a distended right non-communicating rudimentary horn containing the pregnancy.

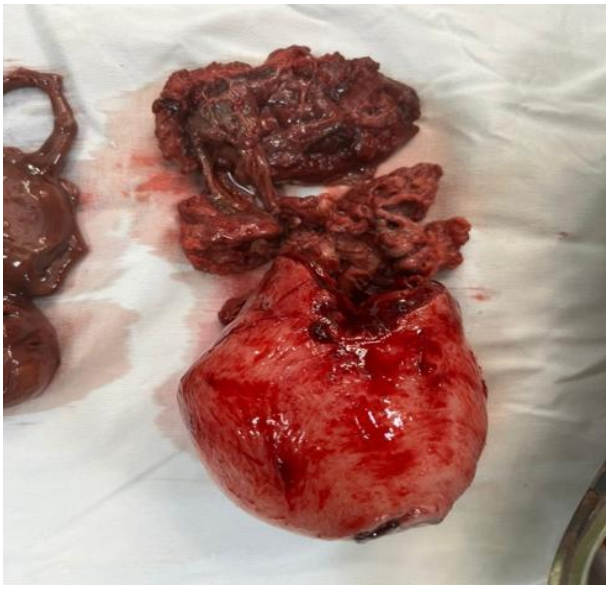

Figure 3: Gross specimen of the excised right non-communicating rudimentary horn.

The removed specimen was sent for histopathological examination. The postoperative course was uneventful. The patient was discharged stable on postoperative day five. Six weeks later she was asymptomatic, the abdominal wound had healed satisfactorily and ultrasonography revealed a normal residual unicornuate uterus. Screening for associated renal anomalies was within normal.

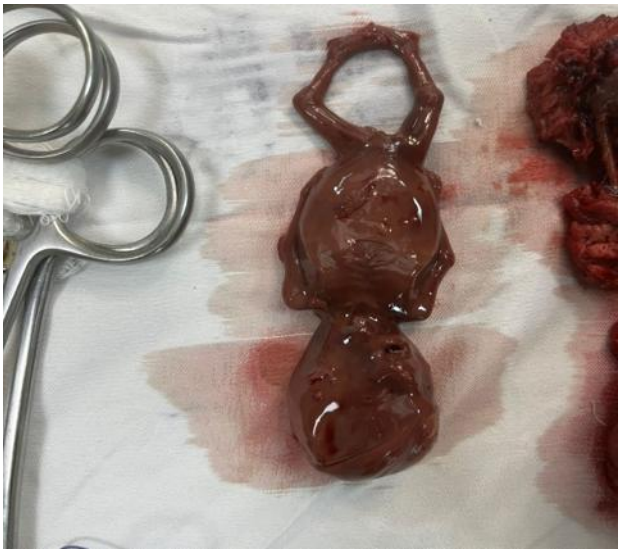

Figure 4: Gross specimen showing products of conception removed from the rudimentary horn.

DISCUSSION

Rudimentary horn pregnancy is a rare but potentially life-threatening obstetric emergency. It occurs in a unicornuate uterus with a non-communicating rudimentary horn and is associated with substantial maternal morbidity when rupture occurs.[2,5]

Most cases are diagnosed after rupture because of the rudimentary horn's limited distensibility, usually between 10 and 20 weeks of pregnancy.[2,3] Maternal morbidity is largely related to massive haemorrhage and the need for emergency surgery.[3,5]

The clinical presentation is nonspecific and may resemble a tubal ectopic pregnancy.[5] In the current case, the patient presented with mild abdominal pain and vaginal bleeding and was hemodynamically stable. Ultrasonography suggested a right adnexal ectopic pregnancy, and the diagnosis of rudimentary horn pregnancy was made only at laparotomy.

Tsafrir et al described sonographic criteria for the diagnosis of rudimentary horn pregnancy, including an asymmetrical bicornuate uterus-like pattern, absence of continuity between the cervical canal and the gestational sac, and myometrial tissue surrounding the gestational sac.[4] In contrast, the diagnostic accuracy of ultrasonography may decrease with advancing gestational age. In stable patients, MRI can improve characterization of the uterine anomaly and may help confirm the diagnosis before surgery.[4]

The recommended management is prompt surgical excision of the pregnant rudimentary horn along with the ipsilateral fallopian tube to prevent rupture and recurrence.[6] Laparoscopy is feasible in selected early pregnancies, whereas laparotomy remains appropriate when gestational age is advanced, the patient is unstable, or the diagnosis is uncertain.[6] This case emphasizes the need for a high index of suspicion in women presenting with an adnexal ectopic pregnancy beyond the first trimester.[1,5,6] Timely surgical intervention before rupture resulted in an excellent maternal outcome.

CONCLUSION

Rudimentary horn pregnancy is a rare form of ectopic pregnancy associated with a unicornuate uterus, and it commonly presents as a tubal ectopic pregnancy on ultrasonography. Most such pregnancies rupture between 10 and 20 weeks if left untreated, making surgical excision of the rudimentary horn with ipsilateral salpingectomy the treatment of choice. Early diagnosis and timely intervention remain essential to reduce maternal morbidity and mortality.

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