Left Sided Abdominal Ectopic Pregnancy with Placenta in Rudimentary Horn-Complicated With Acute Renal Failure: A Case Report

Nighat Shafiq, Tabassum Muzaffar*, Sadia Fatima*, Amina Sohail*

Army Medical College/National University of Medical Sciences (NUMS) Rawalpindi Pakistan, *Combined Military Hospital/ National University of Medical Sciences (NUMS) Rawalpindi Pakistan

ABSTRACT

Though unicornuate uterus with rudimentary horn is a rare Mullerian duct malformation, it is marked with frequent undesired gynaecological and obstetrical complications. Rupture of gravid horn results in maternal and foetal morbidity and mortality. A case of rudimentary horn pregnancy at 15 ± 4 weeks was reported here, with acute renal failure in the post-operative period. The favorable maternal outcome was only ensured after extensive hemodialysis sessions apart from appropriate intensive care management.

Keyword: Acute renal failure, Ectopic pregnancy, Rudimentary horn placenta.

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INTRODUCTION

Rudimentary horn pregnancy is a rare entity with a reported incidence of 1 in 76,000 to 1 in 150,000.[1] Abdominal pain is the most common presenting complaint, with a correlation of uterine rupture in 70% cases resulting in life-threatening intra-peritoneal haemorrhage.[2] We reported a case of ruptured rudimentary horn pregnancy at 15^{+4} weeks of gestation.

CASE REPORT

A 19 years old primigravida who was 15^{+4} weeks pregnant was admitted to Combined Military Hospital, Rawalpindi, Pakistan, on Feb 2019, with severe generalized abdominal pain and vomiting for 12 hours. She was in hypovolemic shock with the pulse of 130/min, BP 80/30 mmHg, having generalized abdominal tenderness but no vaginal bleeding, and a closed cervix. Ultrasound (USG) revealed an empty uterus with a foetus lying in the abdomen along with free abdominal fluid (Figure-1 & 2). After fluids resuscitation, the patient was transferred for an emergency laparotomy. There was a ruptured non-communicating accessory uterine horn with a dead foetus lying in the abdomen and intact uterine cavity. Accessory horn, foetus and placenta were removed (Figure-3). Four units RCC, six units FFPs and six units of platelets were transfused to the patient.

Post-operatively, the patient was kept in ITC, where she exhibited disseminated intravascular coagulation (DIC) and acute tubular necrosis with urea 56 mmol/L, creatinine 344 µmol/L, serum K^{+1} 6.1 mEq/L, platelets 29 x 10^3/µL, haemoblobin 6.7 g/dL. Peripheral smear demonstrated schistocytes 5-6/HPF and toxic granulation. ABGs exhibited pH 7.53, $PaCO_2$ 85 mmHg, PaO_2 76.9 mmHg, HCO_3^{-1} 31.9 mEq/L. Hemodialysis was done on the first post-op day (POD), followed with seven sessions of hemodialysis over the next ten days. She was discharged on 11^{th} POD with a plan to continue hemodialysis sessions twice a week for three weeks, followed by a renal biopsy. On 14^{th} POD, she presented in a critical condition with uncontrolled generalized tonic-clonic (GTC) seizures with altered sensorium, low GCS, bilateral coarse crepts and nil urine output. She was admitted to ICU due to Type-1 respiratory failure (ARDS), uremia, DIC with HUS. She had to be intubated and placed on ventilatory support with broad-spectrum antibiotics. Urea was 12.3 mmol/L, creatinine 636 µmol/L, and thus hemodialysis was continued. Electrolytes correction was done, and RCC was transfused. She was successfully weaned off from mechanical ventilation after 72 hours and started with RRT (renal replacement therapy). Ten hemodialysis sessions were done during the second hospital stay and finally discharged after 20 days of hospital stay.

(Written informed consent was taken from the patient to publish this case report and any accompanying images.)

DISCUSSION

A unicornuate uterus is a rare developmental anomaly of the Müllerian duct.[3] Trans-peritoneal migration of germ cells can result in pregnancy with a non-communicating rudimentary horn.[4] Usually, such patients remain asymptomatic.

Correspondence: Dr Tabassum Muzaffar, Gynaecologist, Combined Military Hospital Rawalpindi Pakistan

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Figure-1: Intraoperative photograph showing the uterus with the rudimentary horn attached to its left.

Figure-2: Surgical Removal of rudimentary horn.

Figure-3: Excised rudimentary horn with fetus and placenta.

Significant obstetric complications have been reported in the literature.[3] Rarely an unruptured rudimentary horn pregnancy continues to term. Ultrasonography is a suitable modality for differentiating any ectopic or rudimen-tary horn pregnancy from intrauterine pregnancy. An empty endometrial cavity with a positive β-HCG test should raise a strong suspicion for ectopic pregnancy. USG can characterize the contour of the uterus and the presence of a rudimentary horn. If time constraint is set aside, MRI can define abnormal placentation with the vascular supply of the pregnancy and thus rendering essential information in surgical planning.[5] 80-90% cases present with rupture prior to the completed 20 weeks of gestation.[6] Management revolves around surgical techniques aiming to remove the pregnancy and rudimentary horn to avert future recurrence. In addition, fluid resuscitation and blood products are frequently used in the management.[7] Advance risk assessment with anticipation, followed with a standardized-staged approach towards haemorrhage can result in better obstetrical outcome.[8]

Acute renal failure (ARF) is marked with rapidly falling GFR with the retention of urea and creatinine. In post-partum period, ARF carries a significant linkage to maternal morbidity and mortality. The reported incidence of pregnancy-related ARF in developing countries is 4.2-15%, contrary to 1-2.8% in the developed countries. A timely and intensive targeted multi-disciplinary approach can avert maternal mortality (12%).[9] Around 30% patients become long term dialysis-dependent due to irreversible cortical injury. Early diagnosis with the right intervention can result in a favourable outcome.

A delayed diagnosis of rudimentary horn pregnancy can have dire consequences in the patient outcome. The high index of suspicion is pivotal in early diagnosis prior to rupture to prevent life-threatening consequences. Maternal morbidity and mortality can be reduced with early recognition and timely intervention.

Conflict of Interest: None.

Authors' Contribution

NS: Data revision, TM: & SF: Supervision, AS: Manuscript writing.

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