Rudimentary Horn Pregnancy

Col TK Bhattachary*, Lt Col P Sengupta⁺

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Introduction

Mullerian duct anomalies are infrequently encountered in day to day gynaecology practice. They result from defective fusion or defective absorption of female reproductive system during embryonic life. Though majority of patients with mullerian anomalies are asymptomatic, nearly one quarter may present with symptoms and signs of obstruction/reproductive dysfunction. A rare pregnancy in a non-communicating rudimentary horn with rupture is presented.

Case Report

22 years old female was brought by her parents in hypovolaemic shock with a history of amenorrhea of 140 days. Pregnancy was confirmed by immunological test in her village. Her earlier cycles were irregular of 5-6 day duration, every 30-45 days. She was primigravida, married three and half years earlier and gave no history of dysmenorrhoea. She complained of severe upper abdominal and right shoulder pain earlier associated with extreme weakness, giddiness and profuse sweating.

Examination revealed an extremely pale individual with cold and clammy skin, thready pulse of 140/min and systolic pressure of 70mm of mercury. There was abdominal distension with tenderness and guarding. Uterus was not palpable per abdomen and bimanual pelvic exam revealed forniceal fullness with tender cervical movements at extremes, right more than left. A clinical diagnosis of rupture ectopic pregnancy was made, patient was resuscitated and taken up for emergency laparotomy. Ultrasonography of abdomen and pelvis revealed fluid in Morrison's Pouch, both paracolic gutters and pelvis. Fetus with a biparietal diameter of 27mm corresponding to 14 weeks 2 days with no cardiac activity was seen lying in anterior uterovesical pouch.

At surgery dead fetus was seen attached to placenta through intact cord. Pregnancy was in the right horn of bicornuate uterus with evidence of rupture at fundal region. The gravid horn was not communicating with cervix and was attached to it with thick fibrous band. Both tubes and ovaries were healthy. There was haemoperitoneum of approx 3 ltrs.

Excision of the right rudimentary ruptured gravid horn of uterus along with right fallopian tube and fetoplacental elements were carried out and abdomen closed after toileting (Fig 1). Intra and post-operatively patient was transfused four pints of cross-matched blood. Patient made uneventful recovery and was discharged to home on tenth day. She was reviewed after four weeks when investigations ruled out any renal tract anomaly. At the time of writing this case report patient had reported to us with amenorrhea of two and a half weeks and a viable intra uterine pregnancy.

Discussion

Mullerian duct anomalies result from defective fusion or absorption of primordial ducts. Implication of uterine malformation relates inversely to the degree of fusion defect and may be associated with renal tract anomalies. Bicornuate uterus has been reported by various authors as the most common anomaly [1,2,3]. In a five year retrospective study, Abha et al observed 56 patients with Mullerian anomalies among a total of 2,32,457 patients (incidence : 0.024%). These patients had rudimentary uterine horn and presented with rupture like ours. Pregnancy in a rudimentary horn of a bicornuate uterus is extremely rare as encountered in our case and its incidence has been reported to be between 1:1,00,000 to 1:1,40,000 pregnancies [5].

90% of rudimentary uterine horns are non communicating to main uterine cavity. The pregnancy is believed to have resulted from transmigration of ovum

Fig. 1 : Excised ruptured rudimentary horn of uterus alongwith fetus

*Professor and Head (Obstetrics and Gynaecology), Armed Forces Medical College, Pune. ⁺Classified Specialist (Pathology), Military Hospital, Devlali.

although corpus luteum has been observed on the contralateral side in only 10% of the cases [6].

The timing of rupture may vary from 5 to 35 weeks depending on the musculature of the rudimentary horn and ability of the musculature to hypertrophy and dilate. Rupture is associated with catastrophe and majority (70%-90%) rupture before 20 weeks [6]. The bimanual finding of palpable mass extending outward from uterine angle (Baart de la faille's sign) or displacement of fundus to contralateral side with rotation of uterus and elevation of the affected horn (Ruge Simon Syndrome) should arouse suspicion. An ectopic pregnancy in the rudimentary horn of a bicornuate uterus or an interstitial pregnancy may be confirmed during ultrasonography by the eccentric location of uterine sac and failure to demonstrate the sac in the longitudinal section near envelopment [7]. Ectopic pregnancy in the tube can be mistaken as one horn of bicornuate uterus but the presence of an endometrial echo will help in differentiation. Intraperitoneal hemorrhage in these cases is life threatening and only in rare case fetal survival has been reported. Maternal mortality used to be 87% but has declined to around 5% through early intervention. Because the wall is thicker and more vascular than the tube, bleeding is more torrential and 90% of maternal deaths have been reported within 10-15 mts after rupture. In the present case since the patient reported after rupture the diagnosis was only confirmed at laparotomy and timely resuscitation with expeditious

surgery enabled us save the patient.

Conclusion

Rudimentary horn pregnancy is an extremely rare entity associated with life threatening consequences following rupture. Attempts should be made for early diagnosis to avoid maternal mortality. The association of subfertility with congenital uterine anomalies must be remembered and corrective surgery performed. These patients should also be screened for associated renal tract anomalies.

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