CASE REPORT

Ruptured Ectopic Pregnancy in the Rudimentary Horn of Uterus at 14 weeks - A case report at Fatima Memorial Hospital

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INTRODUCTION

Pregnancy in the rudimentary horn is rare and represents a form of ectopic gestation. Reported incidence varies from 1:100 000 to 1:140 000 pregnancies[1]. Despite recent advances in ultrasound, the diagnosis of pregnancy in the rudimentary horn remains elusive with confirmatory diagnosis being made at laparotomy. Due to the variable muscular constitution of the wall of the rudimentary horn, pregnancy can be accommodated until late in pregnancy (usually in the second trimester) when rupture occurs, manifesting commonly as acute abdominal pain with high risk of maternal mortality. The rudimentary horn may or may not communicate with the uterine cavity. Most reported cases of pregnancy in the rudimentary horn have been in the non-communicating horn[2]. We present a case of pregnancy in the communicating horn of the uterus which ruptured at 14 weeks. Laparotomy following collapse of the patient revealed a ruptured communicating rudimentary horn with haemoperitoneum, emphasizing the difficulty of antenatal diagnoses.

CASE HISTORY

A 23 year old unbooked primigravida married for last 6months with no significant past history presented in emergency with gestational amenorrhea of 14 weeks and 2 days with complain of severe abdominal pain since morning. Pregnancy was confirmed by urine for pregnancy test and followed by no antenatal visit. Pain was sudden in onset, severe not relieved by analgesics. She consulted a local doctor who did her obstetrical ultrasound and diagnosed her as a case of ectopic pregnancy and referred her to Lahore for further management. She was received pale with cold clammy extremities. a Rapid feeble pulse and the blood pressure could not be measured. The abdomen was tense on palpation and the fetal heart was not heard. There was no evidence of bleeding on vaginal examination. Hematological investigations showed Hb% 3g/dl, TLC 8.6 x 10^3 U/ml, Coagulation profile normal, Liver and renal function test normal, Obstetrical USG showed anteverted normal size uterus and abdominal pregnancy just superior to uterus having decreased motility but positive cardiac flicker. Placenta is anterior implanted to thick hyper vascular lower omentum. Fetus surrounded by clots and blood extensive hemoperitonium CRL 14 weeks. Emergency laparotomy following resuscitation revealed 3000 ml of blood in the peritoneal cavity. And ruptured rudimentary uterine horn with a baby floating in blood in peritoneal cavity and placenta attached to the base of rudimentary horn. The fetus lying free in the abdomen cavity, left to the uterus was a ruptured rudimentary horn which was connected to it by a short fibrous stalk. The right tube and ovary appeared healthy and normally attached to the uterus. The left tube attached to the rudimentary horn, but the left ovary was attached to the uterus. In this left ovary was a corpus luteum. Inside the ruptured horn was the placenta and part of the umbilical cord.

The fibrous stalk was found to be connected to the main uterine cavity by a 2cm tunnel. Continuity with the main uterine cavity was confirmed by the use of a blunt probe. The ruptured uterine horn and left tube were excised from the anterior uterine wall, which was then repaired in two layers with absorbable sutures. Both kidneys appeared and felt normal. The postoperative period was uneventful. She was transfused 6 units of blood and discharged after her haemoglobin concentration had reached 9.4g/dl on the seventh postoperative day.

DISCUSSION

Several cases of ruptured pregnancy in the rudimentary horn of the uterus have been reported[3,1,4,5] since the first case was described by Mauriceau in 1669[6]. The majority of reported cases in the literature have occurred in the non-communicating rudimentary horn of the uterus.

A rudimentary horn results from an arrest in the development of one of the Mullerian ducts with inappropriate fusion with the contra lateral side. The connection between the horn and the uterus may be fibrous or fibromuscular, with 80-85% of cases[7] having no direct communicating channel between the two cavities, unlike this case where continuity was demonstrated. Pregnancies occurring in the non-communicating rudimentary horn are thought to result from transperitoneal migration of

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spermatozoa or the fertilized ovum. This suggestion is based on the finding of corpus luteum in the contralateral ovary in 10% of cases[8,1]. This is in contrast to the finding of corpus luteum in the ipsilateral ovary in this case, suggesting normal migrational mechanism of spermatozoa or the fertilized egg. In most cases of pregnancy in the rudimentary horn, the pregnancy lasts longer than tubal pregnancy because of the variable musculature of the horn, with 80-90% of cases rupturing by mid-trimester and 10% going to term with a 2% fetal salvage rate[8].

Abdominal pain is the commonest presenting symptom associated with the rudimentary horn[9,5,10]. The non-communicating cavitated rudimentary horns are clinically more significant because of pain likely to be associated with endometriosis due to retrograde menstruation[10]. Communicating rudimentary horns are less likely to be symptomatic before and during early pregnancy. The pain associated with rudimentary horns in pregnancy commences from the end of the first and beginning of the second trimester[5]. Vaginal bleeding is rare, but when it occurs it is more likely to be associated with pregnancy in the communicating horn. Sudden collapse due to rupture of the pregnant horn with haemoperitoneum may be the only sign which is common to both types of uterine horn pregnancy as gestation advances. Ultrasound scan (especially transvaginal) is increasingly providing an excellent opportunity for the detection of asymptomatic extrauterine pregnancies in clinical practice before rupture[11,12]. An extrauterine gestation accompanied by a well defined placenta has been suggested to be the criterion for differentiating rudimentary horn pregnancies from abdominal pregnancy[12]. The confines of a rudimentary horn, although very thin, tend to delineate the placenta, making it more identifiable. However, difficulty in diagnosis during early pregnancy is quite common as there are no definite signs to distinguish this abnormal implantation from normal intrauterine pregnancy, especially if it is anterior to the normal horn[12,,9]. Accurate diagnosis is nevertheless possible and important early in pregnancy[13] to allow planning of surgical management[14]. The presence of a low anterior rudimentary horn in pregnancy may be difficult to distinguish from placenta previa[15].

Confirmation of diagnosis is usually surgical at laparoscopy or laparotomy, when it can be mistaken as an ectopic pregnancy prior to excision[9]. Treatment is the excision of the rudimentary horn, although hemi- or total hysterectomy may be necessary to save the life of the woman. Excision is usually carried out at laparotomy, but has been increasingly successfully carried out laparoscopically in unruptured cases[14]. Excision does not appear to interfere with future reproduction as demonstrated by this case but the risk of ectopic pregnancy occurring in the retained portion of the oviduct must be borne in mind. Conservative management should therefore be reserved for women with no surviving children, as in this case.

We have reported this case to highlight the difficulties encountered in making the diagnosis and to reiterate the need to include the possibility of uterine horn pregnancy in the differential diagnosis of recurrent abdominal pain in pregnancy.

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