ECTOPIC PREGNANCY IN NONCOMMUNICATING RUDIMENTARY HORN OF UTERUS

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ABSTRACT

Rudimentary horn is one of the most rare congenital uterine anomalies and ectopic pregnancy in rudimentary horn occurs very infrequently in gynaecological practice. A case of 20 weeks ruptured rudimentary horn ectopic pregnancy managed with salvage of the uterus is presented here in this report.

Key Words: Rudimentary Horn, Ectopic Pregnancy

INTRODUCTION

The incidence of ectopic pregnancy is showing a rising pattern. Ectopic pregnancy may lead to lethal consequences. It is an important cause of maternal mortality not only in developing world but also in developed world. The maternal mortality associated with ectopic pregnancy from 1972 till 1987 remained constant in England and Wales and was 11.5%1. Hence, an early diagnosis and prompt management is crucial to reduce maternal morbidity and mortality.

Female genital tract originates from paramesonephric ducts (Mullerian ducts). Imperfect fusion of the Mullerian ducts from each side results in congenital abnormalities of female genital tract. Incidence of uterine malformation is calculated as1: 1500 and the clinical implication of uterine malformation relate inversely to the degree of fusion defects2. The rudimentary horn may consists of a functional cavity, or it may be a small solid lump of the uterine muscle with no functional endometrium. Dysmenorrhea or dyspareunia may be the presenting symptom. Usually the presentation is with primary infertility or recurrent abortions. In lesser degree of fusion defect patient may present with malpresentation or obstructed labour.

A serious problem arises when pregnancy occurs in a rudimentary horn of uterus. Uterus bicornis unicollis with a rudimentary horn results from an arrested development in one of the Mullerian ducts and subsequent incomplete fusion with the opposite side during third or fourth month of organogenesis.

The diagnosis of the ectopic pregnancy poses greater difficulty particularly when site of ectopic pregnancy is uncommon. Rudimentary horn (RH) of a bicornuate uterus is an example of unusual site. Incidence of ectopic pregnancy in rudimentary horn is reported to be between 1:100,00 to 1:140,000 pregnancies3. A case of 20 weeks ruptured ectopic pregnancy in a rudimentary horn of uterus is presented below.

CASE REPORT

Mrs. G. K., aged 20 years, married for eight months, was admitted in hospital with history of 20 weeks gestational amenorrhea and episodes of abdominal pain and fainting attacks for last three days. She had symptoms and signs of normal pregnancy but she had no antenatal checkup till the time of admission to hospital. She had sudden onset of abdominal pain three days back, which was colicky, starting from hypogastrum and radiating to the whole abdomen and to the shoulders. It was associated with vomiting and fainting attacks. Her past history was unremarkable. She took treatment from a G.P. but it was of no benefit.

An hour before admission Mrs. G. K had an acute episode of pain. She fainted and was brought to hospital. On examination she was found to be a young lady restless and anxious. She was very pale with pulse of 120 beats per minute and blood pressure of 90 mm Hg systolic and 50 mm Hg diastolic. Her systemic examination was normal. Her abdomen was distended with marked tenderness and rigidity all over, revealing signs of free fluid inside. Her fundal height was 22 weeks, uterus was shifted to left side and was extremely tender. On auscultation of abdomen, gut sounds were absent.

On pelvic examination, vulva and vagina
were normal. Cervical os was closed. Cervical excitation was present. There was fullness in all the fornices and she was very tender. Uterus was 22 weeks size. On clinical grounds, an emergency laparotomy was planned.

At laparotomy hemoperitonem was noted with two liters of blood in the peritoneal cavity. Rudimentary horn enlarged to 15 x 12 cm on left side was found to have a transverse rupture, with a fetus inside. Uterus was found intact. Both fallopian tubes and ovaries appeared normal. The horn was excised and hemostasis was secured. The fallopian tube on the side of rudimentary horn was not removed. A stillborn female fetus of about 0.6 Kg along with placenta was found inside the excised horn. Abdomen was closed in layers. Four units of blood was transfused. Her postoperative hemoglobin was 8.0 g%, so two more units of blood was transfused. An appointment was made for her intravenous pyelography. She was discharged after removal of stitches and advise for follow-up. However inspite of counseling, patient was lost to follow-up.

DISCUSSION

The incidence of ectopic pregnancy in rudimentary horn of uterus is reported as 1:100,000 to 1:140,000 pregnancies. A diagnosis of rudimentary horn is apparent mostly when the patient becomes pregnant. About 90% of uterine horns are not communicating to the main uterine cavity. Therefore pregnancy may result from transperitoneal migration of the sperm or fertilized ovum. Presence of corpus luteum on the side contralateral to the rudimentary horn was noted in 10% of the cases. The first ruptured pregnancy in R.H. was reported by Mauriceau in 1969. Since then more than 350 cases have been reported. Pregnancy in rudimentary horn continues for a longer period and may go beyond mid trimester. The rupture of R.H. pregnancy can occur any time between 5 to 35 weeks of gestation depending on the thickness of the musculature of the R.H. and the ability of uterine muscle hypertrophy and dilation. Majority (80-90%) of the cases rupture by the mid second trimester, and approximately 10% will go to term with fetal salvage rate of 2%.8,9,10

Rupture of pregnant R.H. is a catastrophe. An early diagnosis is, therefore, desirable. The diagnosis of R.H. before it ruptures poses a problem. Findings of the pelvic examination in early pregnancy especially deviation of cervix to one side and presence of an adnexal mass should raise the possibility. Definite diagnosis of R.H. pregnancy is usually made at laparotomy. However, ultrasound diagnosis before rupture has been documented by Holden and Hart in 1983.11

Vaginal ultrasound scan could be helpful in confirming diagnosis of ectopic in the first and second trimester of pregnancy prior to rupture. Ultrasound findings include an enlarged uterus with an extra-uterine gestational sac to the right or left of the uterus. The confines of a R.H. would delineate the placenta and gestational sac in it.

R.H. ectopic pregnancy may remain undiagnosed till the termination of pregnancy or induction of labour is decided. RH is not responsive to various pharmacological methods of induction due to extensive interstitial fibrosis. Hence, in such conditions when attempts at termination of pregnancy or induction of labour fail, one should review the case to exclude R.H. ectopic pregnancy.

The management of R.H. ectopic pregnancy necessitates an expeditious laparotomy with excision of that horn. Conservative management in the hope of reaching fetal viability is associated with high maternal morbidity and even mortality. The maternal mortality associated with R.H. pregnancy is significantly higher as compared with tubal pregnancy.12

Although a maternal mortality of 87% was reported in the past, it has declined to 5% through early surgical intervention.13 Because the horn is thicker and more vascular than the fallopian tube, hemorrhage is generally more profuse, therefore, 90% maternal deaths occur within 10-15 minutes of rupture.

Perinatal mortality is appalling in these cases with a fetal salvage of 8% in 10% pregnancies, which reach third trimester. The main factor responsible for this high perinatal mortality is the rupture of ectopic pregnancy before term. Fetal demise may be due to decreased blood supply, limited uterine distensibility, decreased myometrial contractility and possibly hyalination and necrosis of endometrial lining.

In the case presented there was no history of relative sub fertility. She did not presented with bleeding per vaginum, although there was hemoperitoneum. This strengthens the view regarding the lack of communication of the R.H. with cavity of uterus.

An emergency laparotomy was performed, thus, making survival of patient possible. The patient should have an intravenous pyelography to exclude renal tract anomalies as 30% cases of congenital female genital abnormalities are associated with developmental defects in the renal tract. Ectopic pregnancy is fatal if it is not timely diagnosed and treated.
In cases of suspected ectopic pregnancy with shock out of proportion to the duration of amenorrhoea, a R.H. ectopic pregnancy should be considered. Although it has a rare occurrence, it proves lethal unless treated promptly. Hence, when a diagnosis of ectopic pregnancy is suspected, the risk of R.H. ectopic pregnancy should not be ignored.

REFERENCES


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