

Term Live Secondary Abdominal Pregnancy: A Case Report

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Abstract

Term, live abdominal pregnancy secondary to rupture of a uterine rudimentary horn is a rare condition. Pregnancies conceived in the rudimentary horn of the uterus usually rupture during early gestation and present as a catastrophic event. However, rarely, after rupture of the uterine horn the foetus may continue to grow in the abdominal cavity and reach term gestation. A primigravida with a term pregnancy was referred to our centre for caesarean section with ultrasonography findings of transverse lie and placenta previa. During surgery, a live baby was extracted from the abdominal cavity, revealing a bicornuate uterus with rupture of the rudimentary horn. The early peroperative diagnosis and prompt control of the bleeding with excision of the rudimentary horn and transfusion of multiple blood products saved the patient's life. The case is presented for its rarity and to highlight the importance of a high index of suspicion in cases presenting with abnormal foetal presentation.

Keywords: *abdominal, pregnancy, extra uterine pregnancy, live birth, term pregnancy*

Introduction

Abdominal pregnancy can be primary or secondary; primary peritoneal implantation is rare and is diagnosed when embryo implantation occurs within the peritoneal cavity. The term excludes pregnancies implanted in the fallopian tube, ovary, or broad ligament (1,2). In secondary abdominal pregnancy, after implantation in the uterine cavity or fallopian tubes, the foetus is expelled through the defect in the implantation site into the peritoneal cavity, where it continues to grow (3). These pregnancies generally rupture in the second trimester as an acute catastrophic event, which is life-threatening for the mother and is associated with very high fetal mortality (3,4,5). The reported incidence of term secondary abdominal pregnancies is 1:25,000

(6). We report a case of a term viable secondary abdominal pregnancy following rudimentary horn rupture with favourable maternal and foetal outcomes, which is extremely rare.

Case history

A 23-year-old second gravida (one previous abortion) was referred for caesarean section due to transverse lie with abdominal pain, at an estimated gestational age of 38 weeks 2 days. Placenta previa was diagnosed on ultrasonography. It was an unplanned and unsupervised pregnancy. There was no history of vaginal bleeding. Her past medical and gynaecologic histories were unremarkable. General physical examination was normal, and abdominal examination revealed a 34-week

gravid uterus with a live baby in transverse lie. All laboratory investigations were normal.

An ultrasound done the day before had shown a single live intrauterine foetus in transverse lie, with the placenta completely covering the cervical os, with adequate amniotic fluid and no gross congenital anomalies. The patient was admitted to the labour room and was prepared for caesarean section. All relevant investigations were performed and blood was arranged. Caesarean section was started under spinal anaesthesia. On opening the peritoneum, the placenta was seen just below incision line. A hand was passed along the upper margin of the placenta to reach the amniotic sac. After rupture of the membranes, the baby was delivered as breech. It was a live baby weighing 1800 g, with a 5-minute Apgar score of 9. The baby had dysmorphic features due to the pressure effect of being in the abdominal cavity.

After the delivery, the patient's internal anatomy could not be delineated due to multiple bleeders. She began bleeding profusely, and systolic BP fell to 50–60 mmHg while SpO₂ reached 60%–70%. The patient was intubated, and packed cell transfusion and inotropes were started. Additional blood and blood products were arranged. The bleeders were ligated and after releasing the adhesions, it was found that the baby had actually been conceived in the rudimentary horn of a bicornuate uterus that communicated with the main uterine cavity (Figures 1 and 2).

As the pregnancy progressed, the horn ruptured and the pregnancy continued as secondary abdominal, developing adhesions with the rectosigmoid colon and surrounding peritoneal surfaces. The main placental bulk was attached to the rudimentary horn, which was initially thought to be the lower segment.

The rudimentary horn with the placenta was excised from the main uterine body, along with right salpingectomy. The main uterine wall was repaired in three layers (Figure 3).

Both kidneys were palpated and appeared normal. The patient received a total of six units of packed cells and four units of fresh frozen plasma. The postoperative period was uneventful and she was discharged from the ward on day 8, after suture removal.

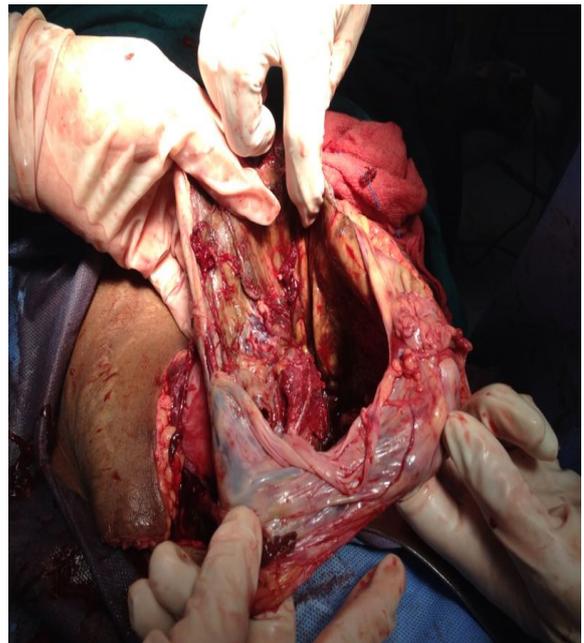


Figure 1: Ruptured rudimentary horn of the uterus where the pregnancy was initially conceived

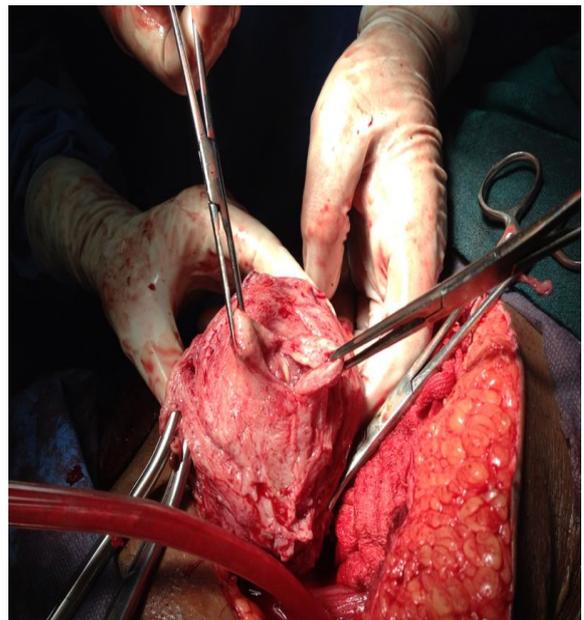


Figure 2: Communication of the rudimentary horn with the main uterine cavity after it is been removed



Figure 3: Reconstructed uterus following excision of uterine horn

Discussion

Variation in the muscular thickness of a rudimentary horn compared to the main uterine cavity leads to an inability of the pregnant horn to distend with the growing foetus and hence, it ruptures (3). In 70%–90% of cases, rupture of the rudimentary horn occurs before mid-pregnancy. It is extremely rare for a foetus to survive until term; only 10% of such pregnancies reach term, with a reported foetal salvage rate of 2% (7). Ruptured rudimentary horn pregnancies present with more severe bleeding compared to tubal ruptures, with a reported high maternal mortality rate. This is due to the increased vasculature and thicker walls of the uterine horn (8). Abdominal pregnancies that reach term gestation are associated with a risk of haemorrhage, coagulopathy, and bowel injury (9). Diagnosis on imaging is challenging and can be missed if ultrasonography is done for first time during advanced gestation. Therefore, it is important to keep this rare but life-threatening condition in mind, especially when an abnormal foetal presentation is present. A set of ultrasonography criteria for diagnosing rudimentary horn pregnancies has been proposed by Tsafirir et al., including the presence of a pseudo-pattern of an asymmetrical bicornuate uterus, the absence of continuity of the cervical canal with the cavity of the horn in which the gestational sac is present, and the absence of myometrial tissue surrounding the gestational sac (10). However, the diagnosis is generally made during laparotomies performed

for various indications. Treatment is usually excision of the rudimentary horn, but in a few cases with excessive bleeding, hysterectomy may be required as a life-saving measure.

The cases in which a preoperative diagnosis is established, a more conservative management approach may be followed by leaving the placenta *in situ* (11). Cardosi et al. reported one case of preoperative embolization of the placental vasculature followed by removal of the foetus from the abdominal cavity, leaving behind the placenta (12).

We highlight the importance of a high index of suspicion, particularly in cases with an abnormal foetal presentation at term, with or without abnormal placentation.

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Conflict of Interests

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