

Laparoscopic Excision of Ruptured Non-Communicating Rudimentary Horn Pregnancy

Rüptüre Non-Komünikan Rudimenter Horn Gebeliğinin Laparoskopik Eksizyonu

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ABSTRACT

Unicornuate uterus with rudimentary horn occurs due to failure of complete development of one of the müllerian ducts and incomplete fusion with the contralateral side. Pregnancy in a non-communicating rudimentary horn is extremely rare and usually terminates in rupture during first or second trimester of pregnancy. Diagnosis of rudimentary horn pregnancy and its rupture in a woman with prior vaginal delivery is difficult. It can be undiagnosed in routine ultrasound scan and in majority of cases it is detected after rupture. We report a case of G2P1 with ruptured rudimentary horn pregnancy at 9 weeks of gestation which was misdiagnosed as tubal ectopic pregnancy.

Key words: non-communicating rudimentary horn pregnancy, laparoscopy, unicornuate uterus.

ÖZET

Rudimenter hornu olan unikornuat uterus müllerian kanalların birinin komplet olmayan gelişimi ve karşı taraf müllerian kanalın inkomplet füzyonu sonucu oluşur. Non-komünike rudimenter hornunda gebelik oldukça nadirdir ve genellikle birinci veya ikinci trimesterde rüptürle sonuçlanır. Daha önce vajinal doğum öyküsü olan bir kadında rüptüre rudimenter horn gebeliğinin tanısı oldukça zordur. Rutin ultrasonografik değerlendirmede tanınamayabilir ve çoğunlukla tanı rüptür sonrası konulabilir. Bu vaka sunumunda; 24 yaşında, G2P1 olan ve ön tanısı tubal ektopik gebelik olan rüptüre rudimenter horn vakasını tartıştık.

Anahtar kelimeler: non-komünike rudimenter horn gebeliği, laparoskopi, unikornuat uterus.

INTRODUCTION

Uterine rupture is an obstetric catastrophe. It is more common in multigravida or scarred uterus and usually occurs in labor. Uterine rupture in the first or in the early second trimester gestation is less common and mostly associated with uterine anomalies. Uterine anomalies are rare, affecting only 0.1-3.0 % of all women (1) and up to 10 % of women who have lost three or more consecutive pregnancies (2). Unicornuate uterus is a type 2 müllerian malformation according to classification of AFS (American Fertility Society) 1988 with unilateral hypoplasia or agenesis that can be further subclassified into communicating, noncommunicating, no cavity, and no horn (3). A unicornuate uterus accounts for 2.4%-13% of all müllerian anomalies (4). Unicornuate uterus with rudimentary horn may be associated with gynecological and obstetric complications like infertility, endometriosis, hematometra, urinary tract anomalies, abortions, and preterm deliveries. Rupture during pregnancy is the most dreaded complication which can be life threatening.

CASE REPORT

A 24-year-old, G2 P1 patient -with a term vaginal birth -in the first trimester (9 weeks) presented to our hospital with acute-onset moderate continuous pain in the abdomen for 1 day. Pain was predominantly in the lower half of the abdomen. The patient's vital parameters were stable. Patient's abdomen was mild distended and on palpation defense and rebound were observed. On per vaginal examination cervical motion tenderness was present and there was no bleeding. Ultrasound examination (GE Logiq 200 PRO Ultrasound Device, USA) revealed 4.5 x 4.0 cm left cystic adnexal mass primarily thought as tubal ectopic pregnancy and 30 mm free peritoneal fluid (Figure 1). Laboratory test results were totally normal except β hCG, that was, 115865 mIU/mL. As these findings were suggestive of ruptured ectopic pregnancy, laparoscopy was performed. The laparoscopic

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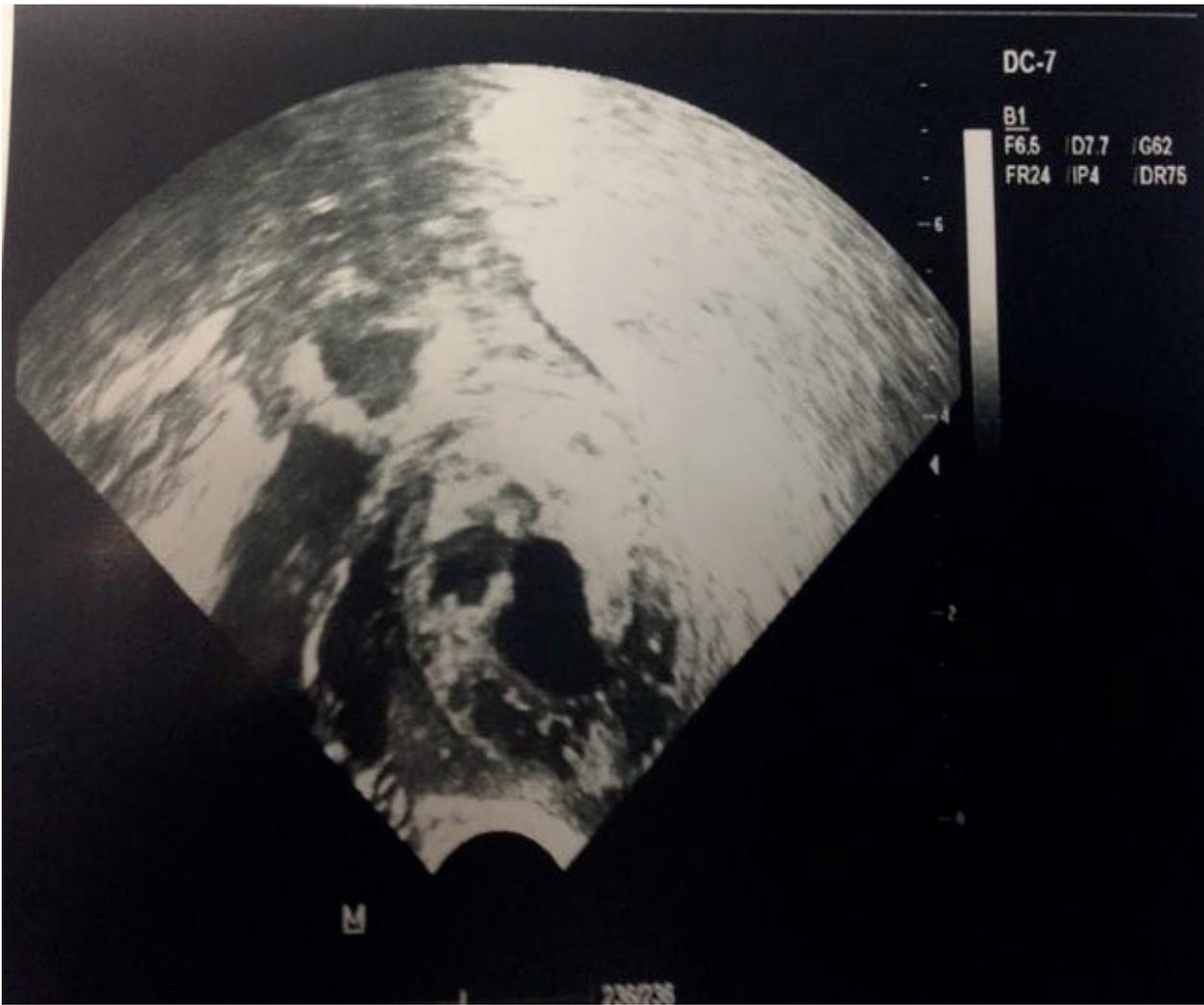


Figure 1: Ultrasonographic image of the rudimentary horn pregnancy.

surgery was performed under general anesthesia. After induction of anesthesia, pneumoperitoneum was induced by using a Veress needle at the umbilicus and insufflated CO₂ was commenced at a rate of 1 L/min until the abdominal pressure of 12 mm Hg was reached. Abdominal insufflation at pressures of 12 mm Hg was held constant by automatic regulation of the carbon dioxide inflow.

The surgery was achieved by using three working ports (trocar). A 10-mm trocar was inserted, followed by insertion of an endoscope and observation of the peritoneal cavity. Five-mm trocars were then inserted into the right and left hypogastric regions. Gastric tube was administered but foley catheter was not used in this case for bladder drainage. Approximately 1 liter of hemorrhagic fluid was removed from the peritoneal cavity. After uterus was manipulated, the left adnexal mass was found to be as a ruptured rudimentary horn pregnancy measuring approximately 4 x 4.5 cm (Figure 2 and Figure 3). The left fallopian tube and left ovary were

normal. The right rudimentary horn was 6 x 6.5 cm in size, and the right fallopian tube and right ovary were normal. Rudimentary horn was totally removed after bipolar cauterization on its base with sparing the left ovary (Figure 4). Afterwards left salpingectomy was performed. The operative time was 55 minutes, and the volume of blood loss volume was approximately 50 ml. The removed left rudimentary horn and right unicornuate uterus were evaluated in detailed, and a 4-5 cm transvers tissue stalk with no communication to the right unicorn uterus was seen. The postoperative period was uneventful. The patient was discharged from the hospital 2 days after surgery.

DISCUSSION

Unicornuate uterus with a rudimentary horn results from failure of complete development of one of the müllerian ducts and incomplete fusion with the contralateral side. In 83% of cases the rudimentary horn is non-communicating (5).

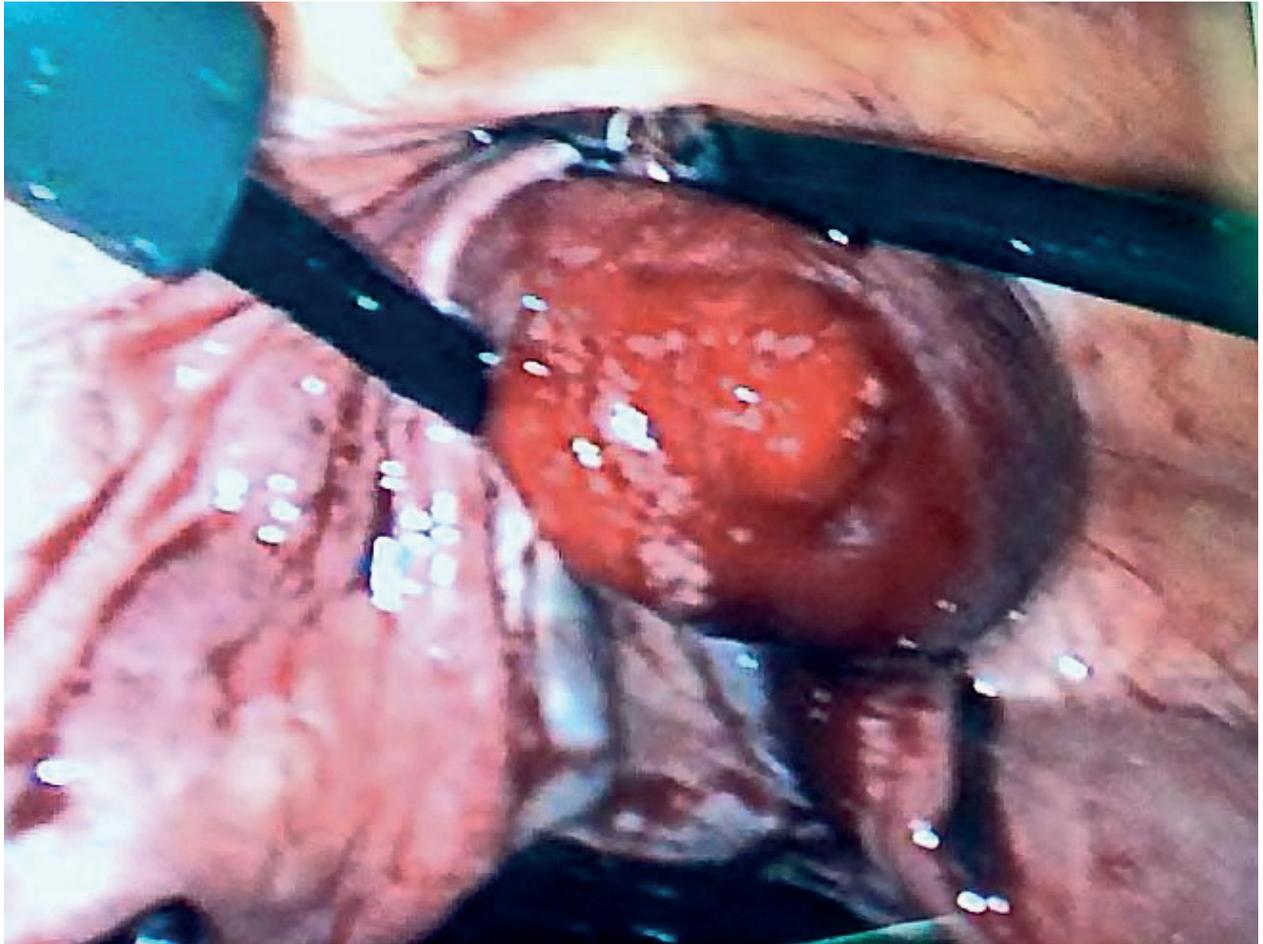


Figure 2: Ruptured rudimentary horn pregnancy.

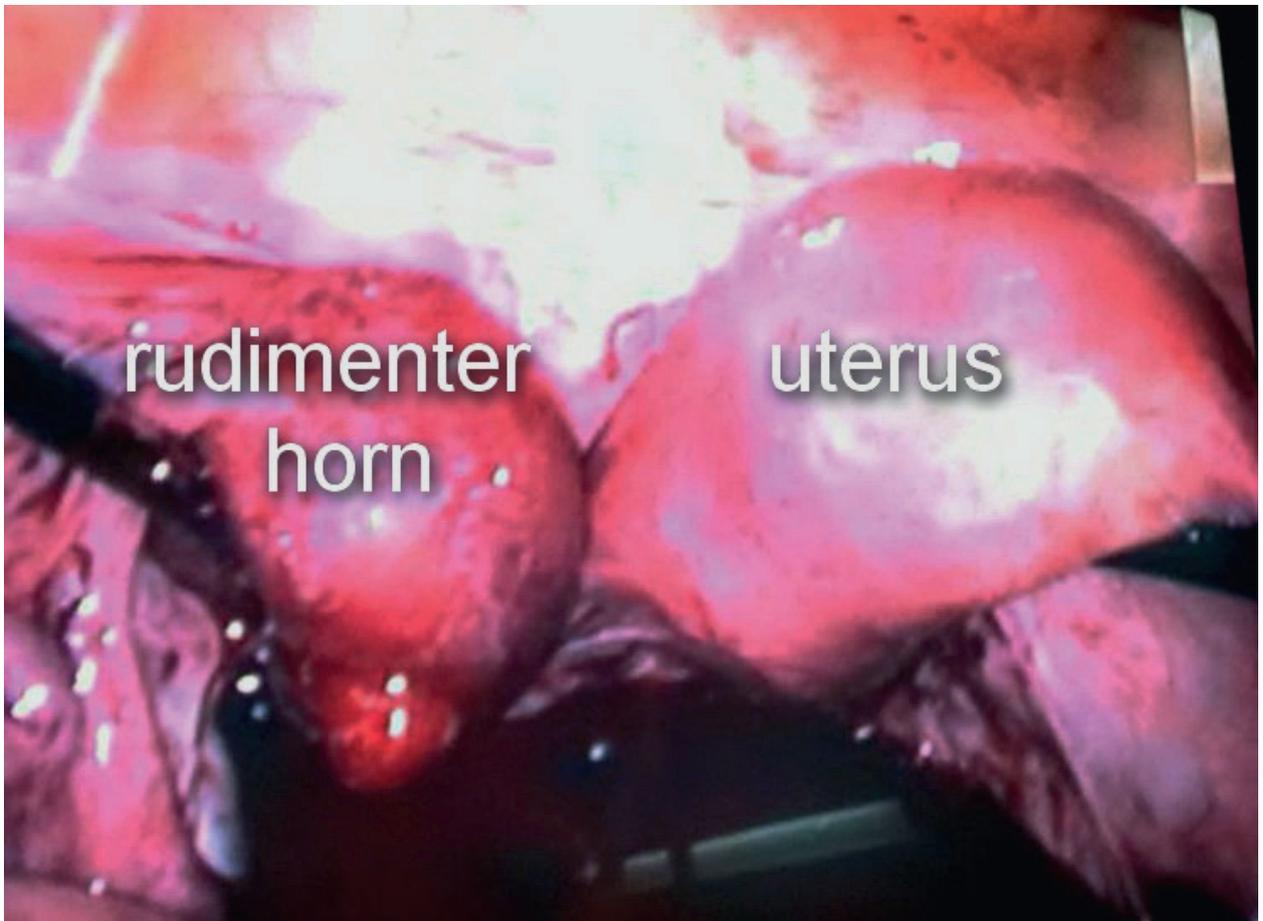


Figure 3: Concomitant appearance of rudimentary horn pregnancy and unicornuate uterus.



Figure 4: Removed rudimentary horn.

Pregnancy in a non-communicating rudimentary horn occurs through transperitoneal migration of sperm or fertilized ovum (6). It is associated with a high rate of spontaneous abortion, preterm labour, intrauterine growth retardation, intraperitoneal hemorrhage and uterine rupture (7). Diagnosis prior to rupture is unusual, but could be made with ultrasonography and MRI. Tsafirir et al. outlined a set of criteria for diagnosing pregnancy in the rudimentary horn (8). Those criteria are:

- a) A pseudo pattern of asymmetrical bicornuate uterus;
- b) Absent visual continuity tissue surrounding the gestation sac and the uterine cervix;
- c) Presence of myometrial tissue surrounding the gestation sac.

None-the-less most cases remain undiagnosed until it ruptures and presents as an emergency. The usual outcome of rudimentary horn pregnancy is rupture in second trimester in 90% of cases with fetal demise (9); however, cases of pregnancy progressing to the third trimester and resulting in a live birth after caesarean section has been documented (7). Conservative management until viability is achieved has been advocated in very select cases with larger myometrial mass, if emergency surgery can be performed anytime and the patient is well-informed (10). Pregnancy in a rudimentary horn carries grave risk to the mother. There is need for increased awareness of this rare condition and to have a high index of suspicion especially in developing countries where the possibility of early detection before rupture is unlikely.

CONCLUSION

Laparoscopic management of ruptured rudimentary horn pregnancy is safe and suitable approach in early gestational weeks if the patient is hemodynamically stable.

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