

Partially Ruptured Rudimentary Horn Pregnancy at 24 Weeks; Diagnosis by Ultrasonography: A Case Report

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Abstract

Objective: To present a patient with a partially ruptured rudimentary horn pregnancy at 24 weeks diagnosed by ultrasonography.

Case: A 33-year-old multiparous patient with gestation of 24 weeks suffering from abdominal pain was applied to our clinic. Sonographic examination revealed a gestational sac possessing a viable fetus at 24 weeks of gestation, lying in a rudimentary horn. It was also confirmed by operation undergone due to signs of acute abdomen and free blood, and a partial rupture was revealed. The rudimentary horn was excised. The baby weighing 480 g died in the early neonatal period. The patient was discharged home on postoperative 3rd day in good health.

Conclusion: Rudimentary horn gestations can rarely go on till late second trimester. A diagnosis can be made with sonographic examination.

Keywords: Rudimentary horn pregnancy, ultrasonography, 2nd trimester pregnancy.

24 haftalık kısmen rüptüre rudimenter horn gebelik; ultrasonografi ile tanı: olgu sunumu

Amaç: 24 haftaya kadar gelişmiş, ultrasonografi ile tespit edilen kısmen rüptüre rudimenter horn gebeliği olan hastayı sunmaktır.

Olgu: 33 yaşında multipar 24 haftalık gebeliği olan hasta karın ağrısı nedeniyle hastanemize başvurdu. Ultrasonografi ile yapılan değerlendirmede rudimenter horn içerisinde 24 haftalık yaşayan fetusla birlikte gebelik kesesi tespit edildi. Akut batın bulguları ve batında serbest kan nedeniyle opere edilen hastada teşhis doğrulandı ve kısmen rüptür saptandı. Hastada rudimenter horn eksizyonu yapıldı. 480 gram olan bebek erken neonatal dönemde eksitus oldu. Hasta post operatif 3. gün şifa ile taburcu edildi.

Sonuç: Rudimenter horn gebelikler nadiren ileri gebelik haftalarına kadar büyüyebilir. Ultrasonografi ile tespiti mümkündür.

Anahtar Sözcükler: Rudimenter horn gebelik, ultrasonografi, 2. trimester gebelik.

Background

Mullerian canal anomalies occur by stopping of mesonephric canal progress or by incomplete fusion. Even there is no symptom for these anomalies; they are related with repeating gestational losses, obstetric complications such as prematurity and infertility. It is hard to know its actual frequency but it is reported as rates of 1/10 and 1/1600 in some publications.¹⁻³ Rudimentary horn anomaly takes

part within mullerian progress anomalies and even rarely, there may be pregnancy within.^{4,5} Rudimentary horn pregnancies are generally ruptured in the beginning of 2nd trimester.⁶ These kinds of pregnancies are diagnosed generally after rupture. We hereby presented case of partially ruptured rudimentary horn pregnancy which is diagnosed by ultrasonography (USG) before the operation and which is advanced to 24th week of pregnancy.

Case

A 33-year-old multiparous patient suffering from abdominal pain for a few hours applied to our hospital. She informed in her obstetric tale that she gave four normal births before and that she was pregnant again. She did not know the last date of her menstrual period and she never had pre-natal control in pregnancy period.

After evaluations; the patient was observed as conscious and pale and her general state was medium. Her blood pressure was 130/70 mmHg and her pulse was 140 beat/min. There was sensitivity, rebound and defense in abdomen. No blood was observed in vaginal examination and there was sensitivity in cervical examination. In laboratory researches, hemoglobin was found as 5.3 gr/dl, hematocrit was found as 16%, WBC was found as 14.210, Platelet is found as 301.000. There was pervasive echogenic fluid within the abdomen and a structure was observed which was extending to the left in which there is a viable fetus at 24 weeks of gestation and that its boundaries were clearly distinguished. The fetus was alive, gestational sac was not damaged, amnion fluid and placenta were normal. When pelvic area was examined, a uterus which was empty was observed on the right having dimension of 10x7x6 (Figure 1). It was found that uterus being thought as having gestation was quite thin (Figure 2). It was thought that it might be rudimentary horn pregnancy. Parasyntesis was done to the patient and defibrin bleeding was observed.

Urgent laparotomy was applied to the patient. During the operation, it was observed that there

were 4-5 units of blood in abdomen and that gestation advanced within rudimentary horn and that there was a bleeding area of partial rupture about 2 cm. on the back (Figure 3). Fetus was taken outside by cutting the front side of rudimentary horn. Later on, rudimentary horn resection was done. The baby was 480 gr. and died in early neonatal period. 4 crossed units of erythrocyte suspension



Figure 2. Ultrasonographic appearance of thin wall structure at rudimentary horn pregnancy.



Figure 3. Appearance of rudimentary horn gestation advanced up to 24th week during laparotomy.



Figure 1. Uterus observed as empty by ultrasonography near rudimentary horn possessing gestation.

were given to the patient before and after the operation. The patient was discharged home on 3rd day in good health after the operation.

Discussion

Pregnancy in rudimentary horn is a event seen rarely which is reported as frequency of 1/40000-1/140000.^{4,5} Even a few cases reaching up to term

were reported, rupture arises generally at the end of 1st trimester or in the beginning of 2nd trimester due to the fact that malformed uterus can not enlarges as normal uterus does.⁶ Few cases continuing up to the end of 2nd trimester are reported.⁷ In the case we presented, fetus reached to 24th week of gestation as alive without any rupture appears.

Rupture appearance is a reason for maternal morbidity and mortality due to serious bleeding. The situation is always mortal for fetus. Therefore, early diagnosis and treatment are very important for rudimentary horn pregnancies. But they are found usually during laparotomy after rupture. There are so few cases diagnosed before rupture. Almost all pregnant are evaluated by USG within first trimester. But if evaluation by USG is not done by experts and systematically, then structures out of the fetus are excluded from the evaluation and abnormalities in pelvic structures can not be recognized. Showing structures out of the fetus as normal when examining with USG will prevent such incorrect diagnoses. While fetus was being watched as normal in USG examination, also a hollow uterus is watched in pelvic area. Even the patient does not have any complain, structures outside the fetus should be examined systematically.

In addition to this, there are studies showing rudimentary uterine horn pregnancy by USG. Daskalakis et al. showed amniotic sac within rudimentary horn at 1st trimester by USG.⁸ Achiron et al reported that they recognized two gestation cases by USG in 2nd trimester before rupture that one is interstitial and the other is rudimentary horn gestation.⁹ Writers here emphasize that they found unaccustomed gestation localization, thin uterine wall, incomplete myometrial layer and hollow uterus as Ultrasonographic examination diagnosis of rudimentary uterine horn gestation. It is seen that rudimentary uterine horn including gestation was settled down completely on the left side of abdomen and its wall was quite thin. When continuing to examine pelvic area, it is found that there is uterus which does not include gestation inside. It is thought that it may be rudimentary uterine horn gestation by these USG diagnoses preoperatively.

Due to the fact that rupture is formed almost before fetal viability at rudimentary uterine horn gestations, rudimentary horn resection and gestation should be stopped in case of determining. This approach will provide prevention of morbidity and mortality to be constituted up to rupture. We applied laparotomy by suspecting about gestation of preoperative rudimentary uterine horn and we confirmed the diagnosis. Uterine horn resection was done after fetus was born.

Consequently, examining other pelvic structures while focusing on gestation sac and fetus in gestation ultrasonography will help us to understand whether the structures in that area are normal or abnormal. As the same way, rudimentary horn gestation may be found in early pregnancy weeks. Avoiding from maternal morbidity and mortality occurring together with rupture is possible with early determination of rudimentary horn gestation. If routine USG determination done in gestation covers whole pelvis, it will provide serious help to diagnosis.

References

1. Green LK, Harris RE. Uterine anomalies. Frequency of diagnosis and associated obstetric complications. *Obstet Gynecol* 1976; 47: 427-9.
2. Golan A, Langer R, Bukovsky I, Caspi E. Congenital anomalies of the mullerian system. *Fertil Steril* 1989; 51: 747-55.
3. Raga F, Bauset C, Remohi J, Bonilla-Musoles F, Simon C, et al. Reproductive impact of congenital Mullerian anomalies. *Hum Reprod* 1997; 12: 2277-81.
4. O'Leary J. L. and O'Leary J. A. Rudimentary horn pregnancy. *Obstet Gynecol* 1963; 22: 371-5.
5. Sfar E, Zine S, Bourghida S, Bettaieb A, Chelli H. Pregnancy in a rudimentary uterine horn: main clinical forms. 5 cases. *Rev Fr Gynecol Obstet* 1994; 89: 21-6.
6. Akhtar A. Z. Term pregnancy in a rudimentary horn of a bicornuate uterus with fetal salvage: a case report. *Asia Oceania J Obstet Gynecol* 1988; 14: 143-6.
7. Chang JC, Lin YC. Rupture of rudimentary horn pregnancy. *Acta Obstet Gynecol Scand* 1992; 71: 235-8.
8. Daskalakis G, Pilalis A, Lykeridou K and Antsaklis A. Rupture of noncommunicating rudimentary uterine horn pregnancy. *Obstet Gynecol* 2002; 100: 1108-10.
9. Achiron R, Tadmor O, Kamar R, Aboulafia Y, Diamant Y. Prerupture ultrasound diagnosis of interstitial and rudimentary uterine horn pregnancy in the second trimester. A report of two cases. *J Reprod Med* 1992; 37: 89-92.