International Journal of Science and Research (IJSR)
ISSN: 2319-7064
Impact Factor 2024: 7.101

# A Unique Case of Ruptured Ectopic Pregnancy in a Rudimentary Horn of the Uterus

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**Abstract:** ***Pregnancy implanted in the rudimentary horn of a unicornuate uterus is very rare, with an incidence of 1 in 75,000 to 1 in 150,000 pregnancies. Both pre-rupture and post-rupture diagnosis of ectopic pregnancy in the rudimentary horn of a unicornuate uterus are challenging. Here is a case of a 21-year-old primigravida who presented with complaints of abdominal pain and vomiting at 17 weeks of gestation. The patient was severely anemic and in hypovolemic shock at the time of presentation. She had diffused lower abdominal tenderness with hemoperitoneum. After clinical and ultrasound evaluation, an emergency laparotomy was performed for suspected ruptured ectopic pregnancy to rule out uterine rupture at 17 weeks of gestation. Intraoperatively, a ruptured ectopic pregnancy in a noncommunicating rudimentary horn was diagnosed. Resection of the rudimentary horn was performed. She was transfused with 4 units of packed red blood cells. It is important to increase awareness about pregnancy occurring in this rare uterine anomaly and to maintain a high index of suspicion, as early detection before rupture is difficult.***

**Keywords:** Rudimentary horn pregnancy, Ruptured ectopic pregnancy, unicornuate uterus

## 1. Introduction

Congenital uterine anomalies originate from defects in development, fusion, or failure of the female reproductive tract septum absorption during embryogenesis. The prevalence of congenital uterine anomalies in the infertile population is estimated to be 16.7%, which is slightly higher than its prevalence in the general population, which is 7.3%. The incidence of pregnancy occurring in a rudimentary horn of the unicornuate uterus is very rare, ranging from 1 in 75,000 to 150,000 pregnancies. Rudimentary horn is one of the rarest congenital uterine anomalies and consists of a relatively normal appearing uterus on one side with a rudimentary horn on the other side. It is difficult to diagnose before surgery and hazardous to maternal life as rupture of the pregnant horn results in severe hemoperitoneum. Roughly 85% of primitive uterine horns are noncommunicative. [5] The majority of the cases remain undiagnosed unless a pregnancy develops in the accessory horn, and most of these patients present when the rupture has already occurred. The diagnosis of the anomaly is usually confirmed intraoperatively. Ectopic pregnancy in the rudimentary horn of the uterus is associated with life-threatening complications, one of which is uterine rupture with a 50% risk.

## 2. Case Report

A 21-year-old woman presented to the emergency department of I.G.I.M.S., Patna, with the sudden onset of generalized abdominal pain, vomiting, dizziness, and an episode of syncope for two hours. She had amenorrhea for 17 weeks. There was no history of vaginal bleeding. She took a urine pregnancy test two months ago and was positive, but she had not undergone any further testing to confirm. Her pulse was 120 bpm, and her blood pressure was 90/60 mmHg. On a general physical exam, she was conscious but profoundly pale. Abdominal examination showed distention with signs of peritoneal irritation, including a markedly tense abdomen with generalized tenderness on palpation. On vaginal examination, the cervical os was closed; however, right forniceal fullness was felt, and cervical motion tenderness was positive. An urgent transabdominal ultrasound was done in the emergency department that showed an abnormal contour of the uterine fundus with fetal cardiac activity in the right fundal region, and a large amount of fluid in the peritoneum, obscuring the view. A provisional diagnosis of ruptured ectopic pregnancy leading to hypovolemic shock was made. Blood workup was done, which showed Hb 6.30mg/dl, beta hCG was 11065.4, and the rest of the investigations were within normal limits.

**Figure 1:** Transabdominal Scan of Ruptured Horn of Pregnancy.

**Figure 2:** Ruptured Horn of Uterus

**Management**

The patient was prepared for emergency exploratory laparotomy due to acute presentation. Intraoperatively, there was a hemoperitoneum of approximately 1000 cc, and a right-sided rudimentary horn was present, which was ruptured, with a ruptured gestational sac partially expelling the fetus in the peritoneal cavity. The ruptured rudimentary horn was removed completely. Average blood loss was 1.5L. 2 units of packed red blood cells were transfused intraoperatively, and 2 units of packed red blood cells during the postoperative period. Postoperatively, the patient's course was uneventful, and she was discharged on the 7th day.

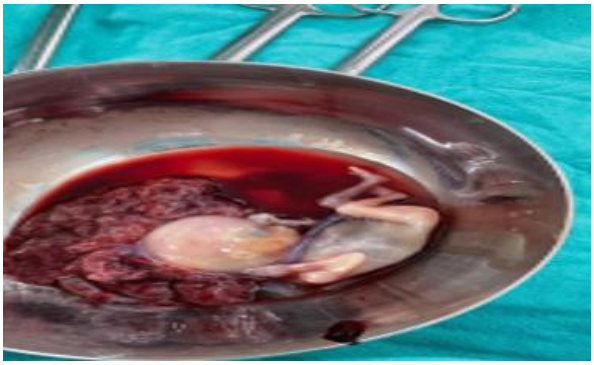

**Figure 3:** Products of conception.

**Figure 4:** Resected Horn of Uterus

## 3. Discussion

- Prevalence of rudimentary horn pregnancy is very low (1 in 6000-15000).[2]
- Rudimentary horn can be communicating or non-communicating, mostly being the latter (90% according to O'Leary and O'Leary).[2]
- Ectopic pregnancy in a non-communicating horn occurs by transperitoneal migration of sperm or a fertilized ovum.[3]
- The average survival rate of neonates found in a rudimentary horn pregnancy, which was not preoperatively diagnosed, was 6%. Also, about 80% of these rudimentary pregnancies were found to undergo uterine rupture.[3]
- In the majority of cases, as in the case report here, women presented with signs and symptoms of hypovolemic shock with acute pain.[2]
- Rudimentary horn pregnancy is confirmed sonographically.
- The best management approach in such cases is surgical excision of the entire rudimentary horn to prevent any future maternal complications.[2]

## Conclusion

This is a case of a primigravida who presented to the emergency department with hypovolemic shock and signs of peritoneal irritation with a history of amenorrhea. Rather than being a classic case of tubal ectopic pregnancy rupture, which was suspected preoperatively, she was found to have a pregnancy in a rudimentary horn of the uterus that ruptured, leading to a surgical emergency. This case highlights the importance of prenatal and early intra-natal imaging modalities for prompt diagnosis of Müllerian duct anomalies so that catastrophic outcomes can be prevented in the event of a rupture.

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