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Case Report

Obstetrics and Gynaecology Section

Rupture of Rudimentary Horn Pregnancy at 16 Weeks Gestational Age in Women with Previous Caesarean Section: A Case Report

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ABSTRACT

Rudimentary horn pregnancy is a rare and potentially fatal form of ectopic gestation, often presents significant diagnostic challenges and carrying a high risk of uterine rupture during the second trimester. We report a case involving a 22-year-old woman, Gravida 2 Para 1, at 16 weeks of gestation, who presented with acute abdominal pain and haemodynamic instability. Despite a previously documented intrauterine pregnancy on routine antenatal ultrasound, further evaluation revealed a ruptured non-communicating left rudimentary horn pregnancy. The patient underwent an emergency laparotomy due to haemoperitoneum and signs of shock. Intraoperative findings confirmed a ruptured rudimentary horn containing a foetus and placenta, along with significant intra-abdominal bleeding. Surgical excision of the horn and ipsilateral salpingectomy were performed successfully. Histopathology confirmed chorionic villi within the excised rudimentary horn, consistent with a non-communicating rudimentary horn pregnancy. The patient had an uneventful postoperative recovery and was discharged in stable condition. Ruptured rudimentary horn pregnancy is a rare but life-threatening obstetric emergency that often mimics other conditions and requires high clinical suspicion for timely diagnosis. Prompt surgical excision with ipsilateral salpingectomy remains the definitive management, ensuring maternal survival despite poor foetal outcomes.

Keywords: Ectopic, Laparotomy, Pregnancy, Rudimentary horn, Uterine anomalies, Unicornuate uterus

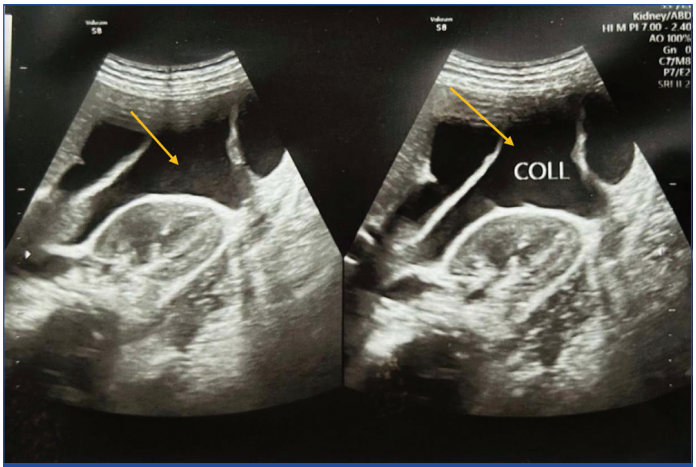
CASE REPORT

A 22-year-old woman, Gravida 2 Para 1, presented to the emergency department of Obstetrics and Gynaecology with amenorrhoea of four months and was referred from a peripheral rural hospital with complaints of acute-onset lower abdominal pain and associated dizziness for two days. The current pregnancy had been confirmed with a urine pregnancy test at 7 weeks of gestation. A routine antenatal ultrasound performed at a peripheral centre had reportedly demonstrated a viable intrauterine pregnancy.

After admission, on clinical examination, the patient appeared pale and was tachycardic with a pulse rate of 112 bpm, regular, and hypovolemic. Her blood pressure was 90/60 mmHg. Abdominal examination revealed generalised tenderness with guarding and rigidity. Per speculum examination showed a closed cervical os with no active vaginal bleeding. On bimanual examination, cervical motion tenderness and fullness in the left adnexa were noted, while the right adnexa appeared normal. The patient had a history of a previous caesarean section two years back, which clinically raised a suspicion of either a ruptured previous scar or a ruptured ectopic pregnancy.

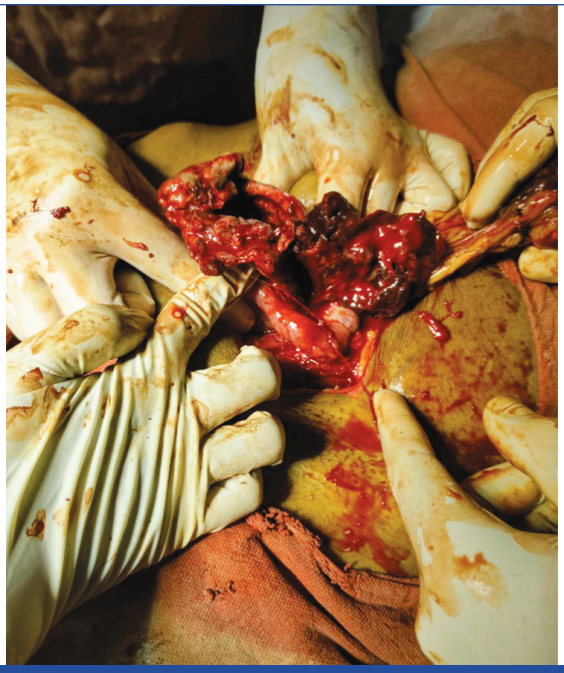
A Focused Assessment with Sonography in Trauma (FAST) scan was done, which further revealed a single live foetus corresponding to approximately 16 weeks of gestation, located within the abdominal cavity and clearly separate from the uterine cavity. The uterus was visualised as empty and deviated. Additionally, moderate free fluid with internal echoes suggestive of haemoperitoneum was identified [Table/Fig-1]. Based on these findings, a provisional diagnosis of ruptured ectopic pregnancy, most likely from a rudimentary uterine horn, was made.

Initial laboratory investigations revealed a haemoglobin level of 8.3 g/dL. In view of her haemodynamic instability, an emergency laparotomy was performed through a low transverse abdominal incision. Intraoperatively, approximately 1100 mL of blood was evacuated from the peritoneal cavity. A ruptured, non-communicating left-sided rudimentary uterine horn containing a foetus and placenta was identified [Table/Fig-2-4]. The horn was connected to the main uterus by a fibrous band. The ipsilateral fallopian tube was stretched over the horn, while the ovary appeared normal. The contralateral uterus, tube, ovary, and previous caesarean scar were intact.

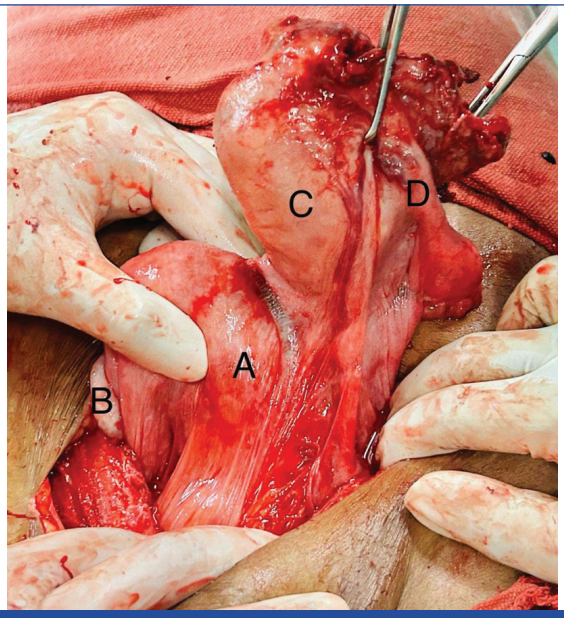


[Table/Fig-1]: Ultrasonography showing a complex collection with internal septations in the pelvis, suggestive of haemoperitoneum.

Excision of the ruptured rudimentary horn along with ipsilateral salpingectomy was performed, and haemostasis was achieved. The patient received two units of packed red blood cells during the operation. Her postoperative recovery was uneventful, and she was discharged on the 8th postoperative day with advice for regular follow-up, preconception counselling, and early antenatal surveillance in subsequent pregnancy. Histopathological examination of the excised specimen confirmed the presence of chorionic villi within the rudimentary horn, consistent with a pregnancy in a non-communicating uterine horn.



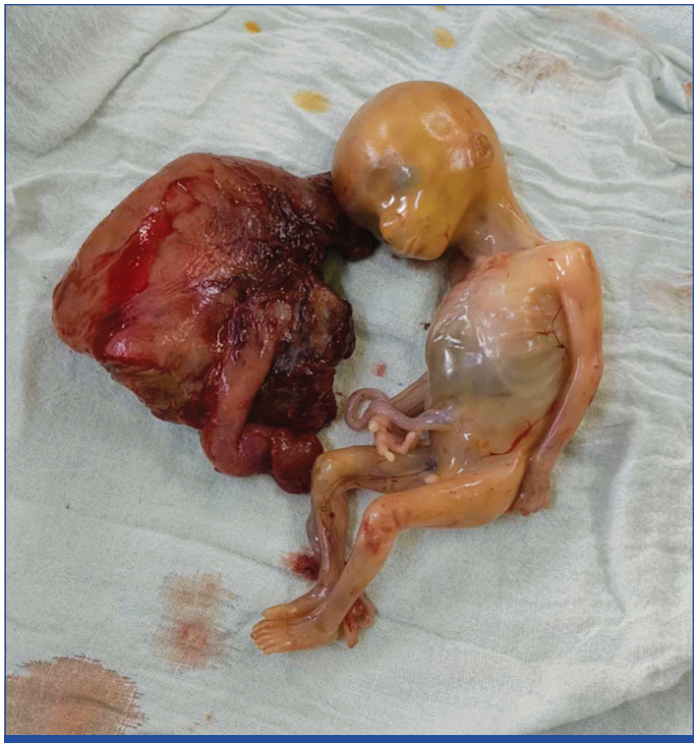
[Table/Fig-2]: Cranial view showing ruptured rudimentary horn with haemoperitoneum and clots.



[Table/Fig-3]: Anterior view showing (A) normal appearing uterus, (B) normal appearing right ovary, (C) ruptured non-communicating rudimentary horn, and (D) left fallopian tube.

DISCUSSION

A pregnancy occurring within a non-communicating rudimentary horn of a unicornuate uterus represents a rare and high-risk subtype of ectopic gestation. These result from developmental arrest of one Müllerian duct, yielding a rudimentary horn—non-communicating in most cases—as seen in this patient's uterus, which was fibrously connected rather than anatomically continuous [1,2].



[Table/Fig-4]: Non-communicating rudimentary horn along with the baby, left fallopian tube.

Epidemiologically, a unicornuate uterus arises in ~1 in 4,000 women, while rudimentary horn pregnancy is exceedingly rare (~1/100,000-140,000 pregnancies) [3,4]. The most accepted explanation for pregnancy with a unicornuate uterus is the transperitoneal migration of sperm cells or a fertilised ovum [3]. The autonomously contracting myometrial tissue of a rudimentary horn is typically thin and poorly distensible, making second-trimester rupture—usually between 10 and 15 weeks—common in up to 90% of these pregnancies [2]. Our case confirms these statistics: rupture occurred at 16 weeks with hemoperitoneum and hemodynamic instability.

Clinical presentation is classically nonspecific—acute abdomen, signs of hypovolemic shock, often misdiagnosed as scar rupture, tubal ectopic or abdominal pregnancy [4]. Ultrasound diagnosis is challenging; sensitivity is reported as low (~26%), diminishing further in advanced gestations [5]. Management invariably involves surgical excision of the rudimentary horn with ipsilateral salpingectomy to eliminate recurrence risk and haemorrhage [6].

While laparoscopy suffices in elective, unruptured presentations, laparotomy remains necessary in unstable cases. Here, a low transverse laparotomy achieved haemorrhage control and transfusion. Postoperative counselling about Müllerian anomaly and obstetric implications for subsequent pregnancies is critical [7]. A few cases from the literature is tabulated in [Table/Fig-5].

Authors name and year of publication	Place	Age/Gravida, Parity	Presenting complaint	Findings	USG Findings	Management
Alami P et al., (2014) [8]	Bangladesh	25 yr G3P1+1	Pain in the abdomen with Hypovolemic shock	P/A- Tense and distended abdomen P/V-B/L fornices full of cervical motion tenderness	Bicornuate uterus with non-communicating rudimentary horn on the left side	Exploratory laparotomy with ruptured left rudimentary horn excision with left salpingectomy
Shingala MR et al., (2021) [9]	Gujarat	20 yr G2P0+1	Severe lower abdomen pain with vomiting	P/A- Tense and rigidity present P/S- No bleeding The bimanual size of the uterus could not be assessed due to intense tenderness	18 week 4 days extrauterine foetus without any foetal movement and cardiac activity in left lumbar region	Exploratory laparotomy with ruptured rudimentary horn excision with ipsilateral salpingectomy
Houmaid H et al., (2021) [7]	Morocco	32 yr G3P2+0	Generalised peritoneal defence and epigastralgia	P/A- guarding and rigidity present P/S-bleeding present P/v- Cevical motion tenderness present	Empty uterus with 16 week intra abdominal foetus without cardiac activity	Exploratory laparotomy with ruptured right rudimentary horn excision with right salpingectomy

[Table/Fig-5]: Comparison with cases from past literature [7-9].

CONCLUSION

Ruptured rudimentary horn pregnancy is a rare but life-threatening obstetric emergency that requires high clinical suspicion and prompt intervention. The clinical challenge lies in its atypical presentation and the frequent misinterpretation of early ultrasounds, which often identify the pregnancy as intrauterine. Surgical management remains the definitive treatment, with excision of the rudimentary horn and ipsilateral salpingectomy being standard. This case highlights the need for meticulous antenatal screening, especially in women with previous caesarean sections or suspected uterine anomalies.

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