

A Rare Case Report of Rudimentary Horn Ectopic Pregnancy in a Hemi Uterus and its Laparoscopic Management

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Abstract: ***Introduction:** Ectopic pregnancy in rudimentary horn of hemi uterus is a extremely rare condition associated with a higher chance of uterine rupture. It is one of the causes for maternal mortality and morbidity. Laparoscopic excision of the ectopic rudimentary horn pregnancy with ipsilateral salpingectomy is the standard treatment at present. **Case report:** Mrs. A. 28 years old G2P1L1 with GA : 11weeks +5days reported with complaints of 3 months of amenorrhea and abdominal pain on and off for the past one week. Urine pregnancy test was positive. Serum beta HCG was 133499 mIU/ml. USG revealed right adnexal mass of size 6x4.8 cm with inner cyst of size 4x4cm with increased marginal vascularity and empty endometrial cavity. With the provisional diagnosis of right unruptured ectopic pregnancy, we decided to proceed with diagnostic laparoscopy which revealed a unicornuate uterus with unruptured right rudimentary horn ectopic pregnancy. **Conclusion:** Rudimentary horn ectopic is rare and life- threatening condition. Due to advances in endogynaecological surgeries laparoscopic management is most commonly preferred.*

Keywords: ectopic pregnancy, mullerian anomaly, rudimentary horn, uterine rupture, case report, hemi uterus, laparoscopy.

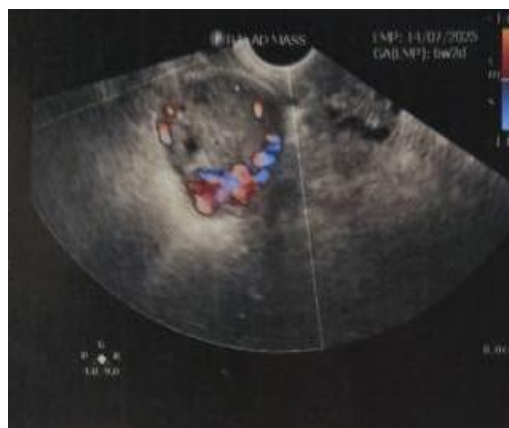
1. Introduction

Hemi uterus with rudimentary horn is found in 0.5% of women. Pregnancy in rudimentary horn of uterus is extremely a rare condition. Its incidence is approximately 1 in 76000 to 150,000 pregnancy. There is a higher chance of rupture of rudimentary horn when the pregnancy advances which can lead to catastrophic haemorrhage. Early diagnosis is still a challenge and laparoscopic approach is the gold standard for both diagnosis and therapeutic management of the rudimentary horn ectopic pregnancy. Here is a case report of ectopic pregnancy in rudimentary horn of uterus and its laparoscopic management.

2. Case Report

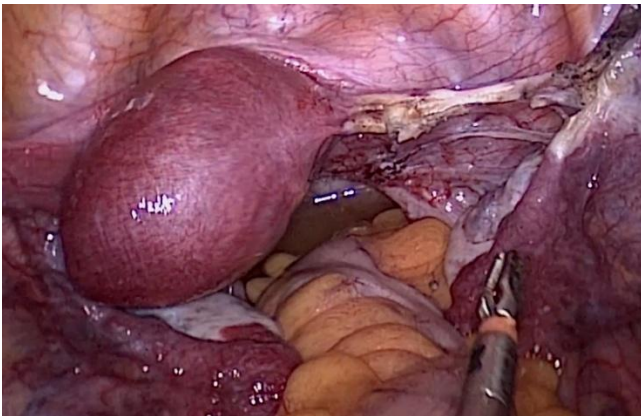
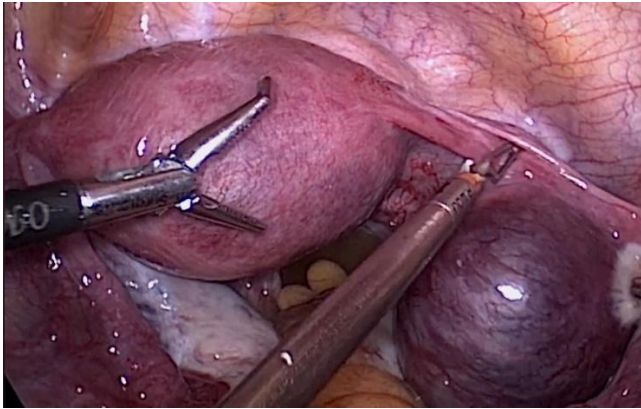
Mrs A 28 years old, married since 5 years G2P1L1 with LMP – 17/01/2026, GA: 11weeks +5days Previous preterm vaginal delivery with last child birth of 3 years and the baby is alive and healthy. Patient reported with complaints of 3 months amenorrhea and abdominal pain on and off for the past 1 week.

Urine pregnancy test was positive and her serum BHCG level is 133499.1 mIU/ml. USG revealed right adnexal mass of size 6x4.8 cm with inner cyst of size 4x4cm with increased marginal vascularity and empty endometrial cavity. The finds suggestive of old unruptured right ectopic pregnancy.



Patient was admitted and posted for diagnostic laparoscopy. All necessary investigation were done. Patient underwent 3 port (5mm laparoscopy under general anaesthesia. Intra operatively, an left unicornuate uterus with communicating right rudimentary horn of ESHRE U4a classification with unruptured ectopic pregnancy. So, the case proceeded with excision of right rudimentary horn with product of conception and right salpingectomy. Specimen retrieved by endobag morcellation under direct visualisation. Specimen sent for HPE.

Post-operative period was uneventful. Patient was stable postoperatively and discharged on 3rd postoperative day. Histopathology confirmed rudimentary horn uterus with product of conception.



3. Discussion

Unicornuate uterus is a type of mullerian anomaly also known as hemi uterus. It is a complete or partial failure in development of one of the mullerian duct. Under ASRM classification it is class II and under ESHRE it is U4 type of mullerian anomaly. It is further classified into (a) Hemi uterus with communicating rudimentary horn, (b) Hemi uterus with non-communicating rudimentary horn, (c) Rudimentary horn without cavity, (d) Isolated Hemi uterus. It accounts for 5% of mullerian anomalies. It may be associated with renal agenesis or ectopic kidney. Rudimentary horn is present in 65% of case. 10% of rudimentary horn communicate with hemi uterus and only 35% of them only have cavity and that too it rarely has functional endometrium. It is usually identified during investigation of infertility, recurrent abortion, endometriosis or any abdominal surgeries.

Rudimentary horn ectopic pregnancy is implantation of gestation within the cavity of rudimentary horn of hemi uterus. In case of communicating horn, fertilization mostly occurs via the communication and in a non-communicating horn it occurs via trans peritoneal migration. Its incidence is 1 in 76000 to 150000 pregnancies. Pregnancy usually carries up to 12 weeks without any symptoms. The symptoms of rudimentary horn ectopic pregnancy are amenorrhea, mild abdominal pain, vaginal bleeding. As the pregnancy advances, due to limited, rudimentary horn rupture occurs leading to massive hemoperitoneum and hypovolemic shock. Early diagnosis still remains challenging. Only 30% of the cases are diagnosed pre rupture. The ultrasound diagnostic criteria for diagnosing rudimentary horn ectopic is TSAFRIR criteria and they are as follows – (a) Pseudopattern of asymmetrical bicornuate uterus. (b) No continuity between

gestational sac and cervix. (c) Myometrial tissue surrounding sac. MRI is a gold standard tool for diagnosis of rudimentary horn ectopic. Laparoscopy is used as a diagnostic tool in a situation where USG diagnosis is inconclusive. Our case is one among that. Differential diagnosis of rudimentary horn ectopic pregnancy are tubal ectopic, Interstitial pregnancy, cornel pregnancy, bicornuate uterus pregnancy.

Once rudimentary horn ectopic is suspected or diagnosed; The treatment of choice is surgical management that too laparoscopic approach is mostly preferred. The 1st laparoscopic ectopic rudimentary horn excision was done in 1990. Indication for laparoscopic management are (a) Hemodynamically stable patient, (b) Early gestation (<12 weeks) but after introduction of morcellation technique even 2nd trimester rudimentary horn ectopic can be done laparoscopically, (c) Expertise should be available. Laparoscopic rudimentary horn excision with ipsilateral salpingectomy is to be done in order to prevent further tubal ectopic pregnancy. Tracing of ureter and identification of ectopic kidney is mandatory because mostly renal system anomalies will be associated with each other as embryonic origin are more or less the same.

Since gravid rudimentary horns are highly vascular, coagulation of round ligament using electric current will help in haemostasis. If fibromuscular attachment is large and if there is significant myometrial defect, suture it with delayed absorbable material preferably V-lock suture for better haemostasis and wound integrity. Specimen morcellated and retrieved, preferably done in endobag under direct visualisation. Advantage of laparoscopic management is minimal blood loss, better visualization, short hospital stay, and early recovery.

4. Conclusion

Rudimentary horn ectopic pregnancy is a rare but extremely life-threatening condition. Early diagnosis is always challenging. Even though MRI is gold standard, laparoscopic management is preferable because of definitive diagnosis and therapeutic management in same sitting. Laparoscopic approach of a second-trimester rudimentary horn pregnancy is a feasible and safe method.