

**CASE REPORT****RUPTURED ECTOPIC PREGNANCY IN A NON-COMMUNICATING RUDIMENTARY HORN OF A UNICORNUATE UTERUS: A CASE REPORT****S Kaudel^{1*}**¹ Department of Obstetrics and Gynaecology, Chitwan Medical College, Bharatpur, Chitwan.**Correspondence to: Dr. Sudeep Kaudel, Department of Obstetrics and Gynaecology, Chitwan Medical College, Bharatpur, Chitwan.**Email: sudeepkaudel@gmail.com***ABSTRACT**

Uterine rupture in first and second trimester in a non-scarred uterus is usually associated with Mullerian anomalies like rudimentary horn pregnancy. Such rudimentary horn pregnancy is difficult to diagnose antenatally but it carries grave consequences for the mother and fetus. Here is a case of undiagnosed ruptured rudimentary horn pregnancy in unicornuate uterus in Gravida 2 Para 0+1 lady at 18 week gestation who was admitted in Emergency with Shock and diagnosis was confirmed at laparotomy.

Key words: *Ectopic Pregnancy, Rudimentary Horn, Uterus*

INTRODUCTION

Pregnancy in a rudimentary horn of unicornuate uterus is rare with an incidence of 1 in 76,000-150,000 pregnancies, which results from incomplete fusion of mullerian ducts.^{1,2} Here is a case report of ruptured non communicating rudimentary horn in 18 week pregnancy in a Nepalese woman.

CASE PRESENTATION

A 22 year old gravida 2 para 0+1 with 18 week gestation was referred to Chitwan Medical College Emergency department with acute pain abdomen since 7 hours prior to admission. On examination, she was in shock with pale, cold, clammy extremities, feeble pulse of 130bpm, BP of 80/40 mmHg and respiratory rate of 20 breaths/minute. Abdomen was grossly distended with guarding and rigidity present. Bowel sounds were sluggish and uterine contour couldn't be appreciated. A speculum examination didn't reveal any cervical and vaginal

pathology and there was no per vaginal bleeding. Vaginal examination demonstrated cervical motion tenderness, and uterine size and contour couldn't be appreciated. Trans-abdominal ultrasound done outside showed a single 18 week extra-uterine fetus with feeble cardiac pulsation with moderate to massive hemoperitoneum. Uterine cavity was empty and placenta was attached to anterior uterine segment of uterus.

Resuscitation was started in Emergency department and with the provisional diagnosis of ruptured ectopic pregnancy she was taken for emergency laparotomy. Hemoperitoneum of around 1.5 liters blood with 500 grams clots with fetus lying in abdominal cavity was noted. There was complete rupture of rudimentary horn on left side of unicornuate uterus with partially attached placenta on that uterine horn (Figure 1).

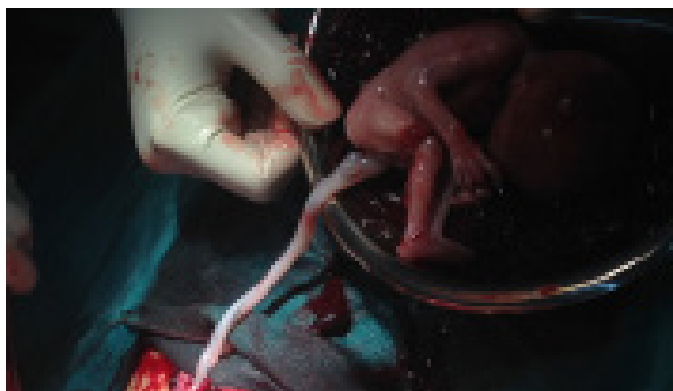


Figure 1: Intra operative photograph showing the complete rupture of rudimentary horn. The fetus is already extruded from the horn with the umbilical cord still attached to it on one end and the placenta in the horn.

Left fallopian tube and left ovary were normal looking and both were attached to left rudimentary horn. A fibro-muscular band was seen attached between unicornuate uterus and rudimentary horn and, no communication noted between the horn and main unicornuate uterine cavity (Figure 2).



Figure 2: Unicornuate uterus with the ruptured rudimentary horn on left side. A fibromuscular band has attached the ruptured rudimentary horn with the unicornuate uterus with normal looking both ovaries.

Uterus was soft in consistency and enlarged to 8 week size. Right fallopian tube and right ovary appeared normal and attached to the unicornuate uterus. Excision of rudimentary horn and left tube was done, and left ovary was conserved. The specimen was sent for histopathological examination, which was reported as “sections from the uterine horn show areas of hemorrhage and necrosis. Section from fallopian tube is unremarkable. Sections of the placenta reveal chorionic villi with area of stromal decidualization.” She was transfused with 3 pints of whole blood and her post-op recovery was uneventful. She was discharged on 7th post-operative day and given a 6 week follow-up appointment when she will do an intravenous urogram. She however did not turn up for her appointment.

DISCUSSION

Rudimentary horn with a unicornuate uterus results from failure of complete development of one of the mullerian ducts and incomplete fusion with the contralateral side. The rudimentary horn is non-communicating in 83% of cases.³ Pregnancy occurs in non-communicating rudimentary horn of unicornuate uterus from the transperitoneal migration of sperm or fertilized ovum.⁴ The associated urologic anomalies are reported to be as high as 50-80% due to close approximation of the two systems, and must be diagnosed either at laparotomy, by palpation, or postnatally by MRI or intravenous urogram.⁵ Such pregnancy is associated with a high rate of spontaneous abortion, preterm labour, intrauterine growth restriction, intraperitoneal hemorrhage and uterine rupture.⁶ 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.⁷ They are: (1) A pseudo pattern of asymmetrical bicornuate uterus; (2) Absent visual continuity tissue

surrounding the gestation sac and the uterine cervix;

(3) Presence of myometrial tissue surrounding the gestation sac. None-the-less most cases remain undiagnosed until it ruptures and presents as an emergency as in this case. The patient presented at a gestational age of 18 week with clinical features suggestive of ruptured extra uterine pregnancy. However the initial ultrasound at 9 week gestation indicated single intrauterine pregnancy without any mullerian anomalies. Ultrasound done 2 hours prior admission to Emergency of this hospital revealed single extra-uterine pregnancy with feeble cardiac pulsation and empty uterine cavity and moderate to massive hemoperitoneum. No such comments as outlined by Tsafirir were mentioned in that USG. Her clinical condition was unstable and with the diagnosis of ruptured extra-uterine pregnancy with hemoperitoneum, she was taken for laparotomy and intraoperatively was diagnosed to have ruptured rudimentary horn pregnancy of unicornuate uterus. The usual outcome of rudimentary horn pregnancy is rupture in second trimester in 90% of cases with fetal demise,⁸ however cases of pregnancy progressing to the third trimester and resulting in a live-birth after caesarean section has been documented.⁶ It has been recommended by most of the obstetricians, that immediate surgery must be performed whenever a diagnosis of pregnancy in a rudimentary horn is made, even if it is unruptured.⁹

However, conservative management until viability is achieved, has been advocated in very few selected cases with a larger myometrial mass, if emergency surgery can be performed anytime and if the patient is well-informed.¹⁰ Pregnancy in a rudimentary horn carries a grave risk to the mother. There is a need for an increased awareness on this rare condition and to have a high index of suspicion, especially in developing countries where the possibility of an early detection before the rupture is unlikely.

REFERENCES

1. Ural SH, Artal R. Third trimester rudimentary horn pregnancy. A case report. *J Reprod Med* 1998;37:919-21.
2. Nahum G. Rudimentary uterine horn pregnancy: case report on surviving twins delivered 8 days apart. *J Reprod Med* 1997;42:525-32.
3. Heinonen PK. Unicornuate uterus and rudimentary horn. *Fertil Steril* 1997;68:224-30.
4. Panayotidis C, Abdel-Fattah M, Leggott M. Rupture of the rudimentary horn of a unicornuate uterus at 15 weeks of gestation. *J Obstet Gynaecol* 2004;24:323-4.
5. Nanda S, Dahiya K, Sharma N, Aggarwal D, Singhal SR, Sangwan N. Successful twin pregnancy in a unicornuate uterus with one fetus in the non-communicating rudimentary horn. *Arch Gynaecol Obstet* 2009;280:993-5.
6. Shin JW, Kim HJ. A case of a live birth in a non-communicating rudimentary horn pregnancy. *J Obstet Gynaecol Res* 2005;31:329-31.
7. Tsafirir A, Rojansky N, Sela HY. Rudimentary horn pregnancy: first trimester pre-rupture sonographic diagnosis and confirmation by magnetic resonance imaging. *J Ultrasound Med* 2005;24:219-23.
8. Liu MM. Unicornuate uterus with a rudimentary horn. *Int J Gynaecol Obstet* 1994;44:149-53.
9. Jayasinghe Y, Rane A, Stalewski H. The presentation and the early diagnosis of a rudimentary horn. *Obstet Gynaecol* 2005;105:1456-67.
10. Nahum G. Rudimentary horn pregnancy: the 20th century worldwide experience of 588 cases. *J Reprod Med* 2002;47:151-63.