

PREGNANCY IN THE NON COMMUNICATING RUDIMENTARY HORN

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ABSTRACT: Pregnancy in the Rudimentary horn is extremely rare and usually terminates in rupture during first or second trimester of pregnancy which is life threatening to the mother. However, with the advent of investigations such as ultrasonography, CT scan, MRI, and laparoscopy, the diagnosis is more often being made before rupture. Here, we report a case of a 29 year old G₃ P₂ L₂ with a pregnancy in the non-communicating rudimentary horn diagnosed at 8 weeks and managed by laparoscopic resection of the rudimentary horn. Thus, highlighting the need for high index of suspicion and role of ultrasound in early diagnosis when indicated by clinical examination.

KEYWORDS: Uterus/Abnormalities, Ectopic Pregnancy, Laparoscopy.

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INTRODUCTION: Mullerian anomalies were initially classified in 1979 by Buttram and Gibbons, then further revised by the American Society of Reproductive Medicine (ASRM) in 1988. Unicornuate uterus with communicating rudimentary horn belongs to class II A (ASRM/AFS). ESHRE/ESGE 2013 has classified it into type U4a, which includes a hemiuterus with a rudimentary (Functional) cavity characterized by the presence of a communicating or non-communicating functional contralateral horn.⁽¹⁾

Incidence of Unicornuate uterus in the general population is 1 in 4000. Unicornuate uterus with rudimentary horn may be associated with many complications like infertility, endometriosis, hematometra, urinary tract anomalies, abortions, and preterm deliveries; 40% of women with unicornuate uterus have associated renal anomalies.

Incidence of pregnancy in the Rudimentary horn is rare and approximately 1 in 76,000-1,50,000.⁽²⁾

Pregnancy in the Non-Communicating Rudimentary horn has been described and is possible with transperitoneal migration of sperm or fertilized ovum.⁽³⁾

CASE REPORT: A 29 year old G₃P₂L₂ who had previous 2 Caesarean sections outside, both for breech presentation, documented to have Unicornuate uterus with non-communicating rudimentary horn on the left side in the first Caesarean delivery, came to our antenatal clinic at 8 weeks of amenorrhoea for routine antenatal checkup. She had regular (3-4/28) menstrual cycles with no history of dysmenorrhoea. Urine pregnancy test positive 1 week after missing her period. She had no history of abdominal pain.

On examination, she had a pulse rate of 84/min, blood pressure 130/80mmHg, no pallor, abdomen soft and non-tender, no mass felt per abdomen. Bimanual examination revealed a soft cervix, uterus anteverted, normal size with a non-tender, non-pulsatile cystic mass approximately 4cm in the left adnexa, cervical excitation test negative.

A routine transvaginal ultrasonogram was performed which showed a bicornuate uterus with a gestational sac in the left rudimentary horn with a fetal pole of approximately 6 weeks and 4 days with cardiac activity and no free fluid in the pelvis. (Fig. 1)

With history, clinical examination and USG, the diagnosis of rudimentary horn pregnancy was made and the patient was counselled for laparoscopic excision of the rudimentary horn.

Intraoperative findings—Normal sized unicornuate uterus with right tube and ovary seen. A left-sided rudimentary horn enlarged to 6 weeks' size and connected to the unicornuate uterus by a non-communicating fibrous band was noted. Left tube and ovary attached to the rudimentary horn. (Fig. 2)

Laparoscopic Resection of Rudimentary horn with left salpingectomy was done. (Fig. 3)

Specimen of Rudimentary horn with gestational sac was retrieved via colpotomy and sent for histopathology. HPR: Section from tissue shows myometrium and endometrium with extensive decidualisation. Few chorionic villi and trophoblastic cells are seen within the endometrial cavity. Section from smaller pieces show fallopian tube with congested vessels.

DISCUSSION: Rudimentary Horn in a unicornuate uterus results from failure of complete development of one of the Mullerian ducts and incomplete fusion with contralateral side. The attachment of the rudimentary horn to the main uterus can vary from a fibro-muscular band to extensive fusion between the two horns where there is no external separation between them; in this case it was the former.

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In 83% of cases, the rudimentary horn is non-communicating.⁽⁴⁾

Pregnancy in the rudimentary horn is associated with high rate of spontaneous abortion, preterm labor, IUGR, uterine rupture and intraperitoneal hemorrhage. The usual outcome of rudimentary horn pregnancies is rupture in the second trimester in 90% cases with fetal demise. The timing of rupture varies from 5 to 35 weeks and varies with the horn musculature and ability to hypertrophy and dilate. In 588 cases of rudimentary horn pregnancies, Nahum (2002) identified that half had uterine rupture and 80 percent did so before third trimester.

Imaging allows early diagnosis of rudimentary horn pregnancy (Edelman, 2003; Khati, 2012; Worley, 2008). Diagnosis can be made by USG or MRI.

Tubal ectopic pregnancy, cornual pregnancy, intrauterine pregnancy, and abdominal pregnancy are common sonographic misdiagnosis.

Tsafir et al., proposed criteria for diagnosis of pregnancy in the rudimentary horn.⁽⁵⁾

1. Pseudo pattern of asymmetrical bicornuate uterus.
2. Absent visual continuity tissue surrounding gestational sac and uterine cervix.
3. Presence of myometrial tissue surrounding gestational sac.

It is recommended by most that immediate surgery be performed whenever a diagnosis of rudimentary horn pregnancy is made, even if unruptured.⁽⁶⁾ as in this case wherein we performed a minimally invasive surgery at an early gestation. Prior documentation of the uterine anomaly as well as disparity in the clinical examination led to our diagnosis which was confirmed with the help of an early ultrasound.

However, in exceptional cases with larger myometrial mass, conservative management until viability is achieved has been advocated, if emergency surgery can be performed any time and the patient is well informed.⁽⁷⁾ Medical management with methotrexate and its resection by laparoscopy is also reported. Edelman et al., showed a case detected at an early gestational week and treated successfully with methotrexate administration.⁽⁸⁾

If diagnosed in a non-pregnant woman, most recommend prophylactic excision of a horn that has a cavity (Fedele, 2005; Rackow, 2007).^{9,10,11,12} In our institution, resection of the rudimentary horn is done if detected incidentally during caesarean section in order to avoid complications that may necessitate emergency intervention.

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Fig. 1: Ultrasound Image Showing Early Pregnancy In The Rudimentary Horn

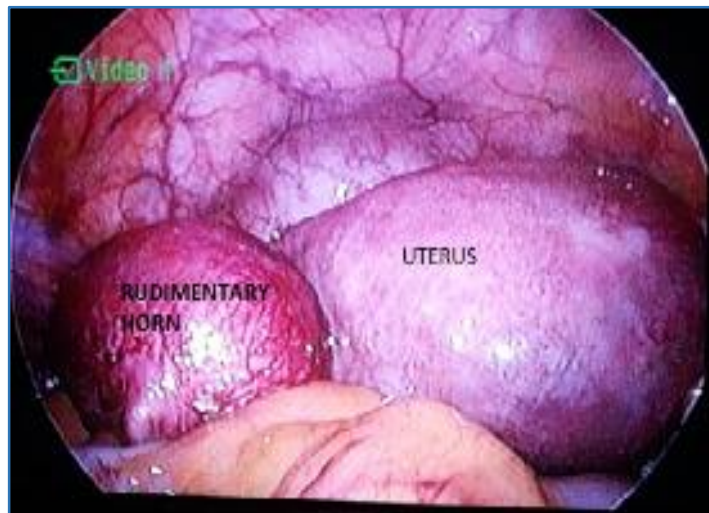


Fig. 2: Intra Operative Finding: Rudimentary Horn Showing Features of Pregnancy



Fig. 3: Laparoscopic Excision of Rudimentary Horn