

# Rudimentary horn pregnancy, a life threatening condition: still very little awareness

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## Background

Rudimentary uterine horn (RUH) results from arrested development of 1 of 2 Müllerian ducts. A rudimentary horn is found in 74% of unicornuate uteri which account for 5% of congenital abnormalities of uterus.

About 92% of rudimentary horns are non-communicating and pregnancy occurs due to transperitoneal migration of sperm or ovum.

Incidence of pregnancy in rudimentary horn is quoted as 1 in 76,000(1). There is 50% risk of rupture of such a pregnancy, mostly in 2nd trimester.

Diagnosis prior to rupture is made in only 14%. Sensitivity of ultrasound diagnosis is only 26%.(2)

Maternal mortality in RUH pregnancy is now reduced to 0.5% mainly due to prompt resuscitation, skilled anaesthesia and surgery.

## Case presentation:

A 32 y.o. primigravida was admitted as an emergency with severe lower abdominal pain at 14 weeks of gestation. She denied any p/v bleeding. Her vital signs were normal. On abdominal palpation she was tender suprapubically with no guarding or rigidity. On speculum examination, the cervical os was closed and no bleeding seen. An abdominal ultrasound scan revealed fetal demise.

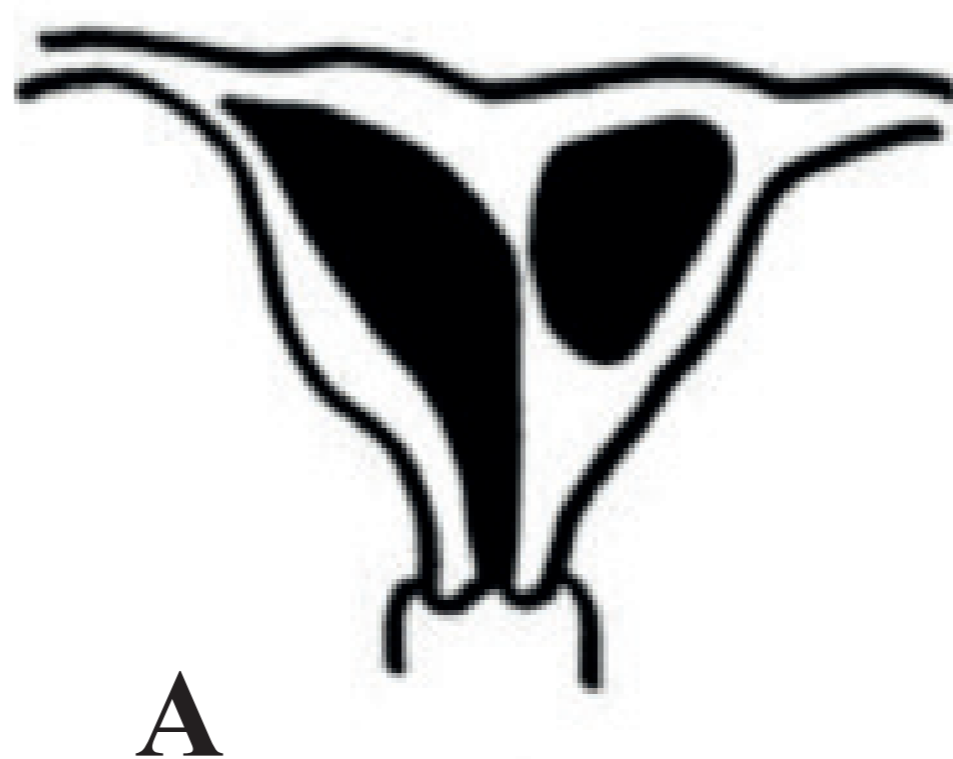
Her previous scan at 12 weeks reported a normal intrauterine viable pregnancy. When she was informed about fetal death she fainted, looked pale and sweaty. Her pulse was raised at 100bpm and BP= 130/80mmHg.

It was thought she was “shocked” with the sudden breaking of bad news. I/V access was secured, bloods taken and IV fluids commenced. The patient failed to respond to a fluid challenge and BP dropped to 100/60 and the tachycardia increased to 115bpm. Her abdomen was tender with guarding, abdominal scan suspected intraabdominal blood clots. Massive haemorrhage protocol was initiated, blood products transfused and patient transferred to theatre urgently.

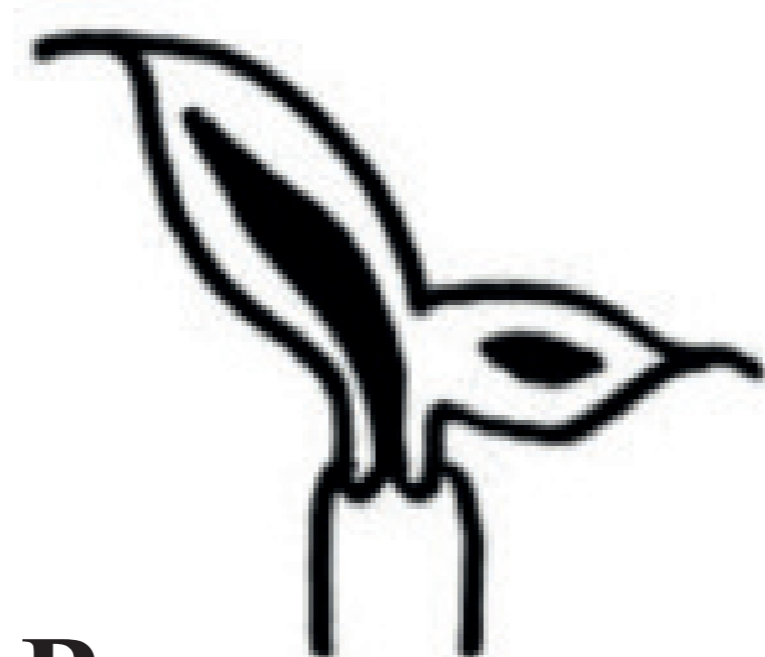
At laparotomy, a ruptured rudimentary horn of uterus was identified with a blood loss of 2 litres and fetus with placenta located in abdominal cavity. The contralateral horn of uterus looked normal. The ruptured horn was excised. She made an excellent post-op recovery.

## Non communicating rudimentary horn types

A and B non-separate horn containing functional cavity with unicornuate uterus  
C separate horn containing functional cavity with unicornuate uterus



A



B



C

## Discussion

Diagnosis and management of rudimentary horn pregnancy is challenging. Assessment of RUH can be aided by MRI, 3D scan, HSG or hysterosonography, hysteroscopy and adjunct laparoscopy.

To increase the chances of diagnosis, it should always be considered in the differential diagnosis of intrauterine pregnancy in a bicornuate uterus, abdominal, cornual and interstitial or any ectopic pregnancy. Tsafir (3) proposed the following criteria for diagnosis.

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

Usually, the presentation is in the second trimester of pregnancy with severe abdominal pain and maternal collapse due to torrential intra-abdominal haemorrhage. Gynaecological problems associated with RUH are hematometra, hematosalpinx and severe dysmenorrhea. Obstetric risks are miscarriage, preterm labour, malpresentation, placenta accreta, IUGR, IUFD and maternal death.

Most recent recommendations are surgical removal of rudimentary horn with ipsilateral tube (to prevent ectopic pregnancy) before pregnancy or early in pregnancy. There have been case reports of conservative management of such pregnancies but neonatal survival is poor at 0-13%.

Assessment of spinal cord and renal tract also required.

Understanding and assessment of Mullerian abnormalities is crucial to good surgical outcome.

There is paucity of data on the outcome of pregnancy after excision of rudimentary horn but if horn and ipsilateral tube is removed there should be conception rate equivalent to salpingectomy after ectopic pregnancy which is 38-66%(4).

## Conclusion

RUH pregnancy is a life threatening condition. Pre rupture diagnosis is very low. An increased awareness of medical and radiological staff is crucial to facilitate earlier diagnosis. Management needs surgical excision of horn and ipsilateral tube. As most cases present after rupture with life threatening haemorrhage, prompt resuscitation multidisciplinary involvement and surgery can save life.

## References

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