

## Pregnancy in the Rudimentary Horn of Uterus at 14 Weeks of Amenorrhea

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### Abstract

Pregnancy in a rudimentary horn is a very rare condition. It is responsible for several complications. Prognosis is reserved because the natural evolution generally leads to a catastrophic uterine rupture at the beginning of the second trimester. Classically, the treatment after foetal extraction consists of excision of the rudimentary horn and associated fallopian tube. I report a case of a patient with history of pregnancy in rudimentary uterine horn, the treatment of which was removal of pregnancy with rudimentary horn and repair of the uterus.

**Keywords:** Mullerian anomaly; Pregnancy; Rudimentary horn; Rupture; Repair.

### Introduction

Congenital malformations of the uterus, also known as Mullerian duct anomalies, are rare in general population (approx 1%). [1,2] These abnormalities result from arrested development, abnormal formation or incomplete fusion of mesonephric ducts. Unicornuate uterus results from unilateral arrested mullerian duct development. [3] Rarely unicornuate uterus may also have a rudimentary horn, more on the right than on the left side. The incidence of unicornuate uterus is estimated to be 1: 250 and its occurrence with rudimentary horn is 1: 100,000. [4] Such anomalies are reported to result in increased rate of miscarriages, recurrent pregnancy losses, preterm labor, infertility and other obstetric complications. Conception in rudimentary horn arises either from a small communication with the uterine

cavity (communicating) or by transperitoneal migration of the fertilized ovum from the contra-lateral side (non communicating). The proportion of non communicating rudimentary horns is 70-90%. [5] The frequency of pregnancy in rudimentary horn is reported to be 1:76000. [6] The clinical presentations vary from being asymptomatic to vague complaints of mild lower abdominal pain with gastrointestinal upset to its severest form of acute abdomen with hemorrhagic shock. The most significant threat of a rudimentary horn pregnancy is the risk of rupture because of poorly developed musculature. [3] In view of the paucity of literature on rare observation of pregnancy in the non-communicating rudimentary horn of uterus, the case reported here is of importance.

### Case Report

A 26 year old lady, married for 5 years, G2P1L1 with history of previous one caesarean section presented to the labour room with h/o generalized abdominal pain and backache at 14<sup>th</sup> week of gestation. Her previous caesarean section was for breech presentation. Her vital signs were stable. On abdominal examination, there was a tender palpable mass of 8x10cm with restricted

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**Fig 1: Shows Enlarged Non-Communicating Rudimentary Horn with Stretched Round Ligament and Fallopian Tube over the Horn**



mobility on the left side. Bimanual examination revealed bulky uterus and same mass was felt in the left iliac fossa. Ultrasound revealed bulky and empty uterus with thickened endometrium. However, there was a non viable fetus of 14 weeks seen towards the left adnexa. Both ovaries appeared normal. Sonographic diagnosis of extrauterine pregnancy on the left side was made with differential diagnosis of abdominal pregnancy. Her previous operative notes were not available, she was planned for laparotomy. During the procedure, it was seen that there

**Fig 2: Shows Cut Section of the Horn with Dead Foetus**



was a right unicornuate uterus with a normal ovary and fallopian tube. To the left, there was a rudimentary horn which was non-communicating, was enlarged to 12 x 12cm (Fig 1).

Resection of accessory horn of the uterus, along with the pregnancy was done with repair of the uterus. Cut section revealed a dead foetus of approx. 14 weeks size (Fig 2). The patient had a smooth postoperative recovery and was discharged from the hospital.

### Discussion

Unicornuate uterus with a rudimentary horn is an abnormality with prognostic implications for poorer outcomes during pregnancies. Women presenting with a history of this anomaly are considered high risk.[7] Co-existing urinary tract abnormalities are frequent in these patients and are dominated by unilateral renal agenesis, homolateral to the side of the rudimentary horn.[8] In the present case the patient was presented as abdominal and back pain at 14 weeks of pregnancy. She was subjected to a thorough physical examination and methods of diagnosis (ultrasound) that revealed pregnancy in rudimentary horn to show non-viable fetus. Reports in the literature confirm that such pregnancies are known to last up to 20 weeks, while there are some cases with a total neonatal survival.[9] The muscle of the rudimentary horn is particularly delicate because it is thin. Moreover, non-functional endometrium usually provokes pathological placentation. Thus, the pregnancy generally evolves towards rupture in the beginning of the second trimester bringing about a hemorrhagic acute abdominal syndrome similar to a catastrophic ruptured ectopic pregnancy.[10,11] During laparotomy it was found that the rudimentary horn was enlarged and not ruptured and was non communicating type. Many times it is found that the horn is ruptured with

haemoperitoneum.[12] Rupture of the rudimentary horn, is the most significant threat to pregnancy and a life threatening situation.[13] In such cases, termination of pregnancy and resection of the rudimentary horn would be lifesaving, in addition to avoiding subsequent pregnancies in the same horn.[8,14] Hence, upon diagnosis of the present condition, immediate laparotomy was conducted to terminate the pregnancy to save a life threatening situation and resect the rudimentary horn to avoid any catastrophe in the future.

Literature reports demonstrate different presentations of accessory horn of uterus. These are frequent abortions[15], infertility, caesarian operations, symptoms of acute adnexal pathology [12], multiple laparoscopies, pain and dysmenorrhoea[16], haematometra[17] and urinary tract infections.[12]

The clinical presentations of rudimentary horn are variable and hence an early diagnosis of the condition remains a challenge. There are varied methods of diagnosis, including 3-dimensional ultrasonography and/or magnetic resonance imaging examinations[18], transvaginal scan, hysterosalpingography, hysteroscopy and laparoscopy.[15] Pelvic examination during the first trimester can raise the alert, with the finding of a latero-uterine mass corresponding to the small gravid horn beside the normal horn.[19] Nevertheless, there are no definitive clinical criteria to diagnose this life threatening condition in case of emergency. In present scenario the patient was presented as generalized abdominal pain and backache at 14 week of pregnancy and hence there were less chances of conducting an earlier detection. Hence, the diagnostic measures adopted in the present case included, just the symptoms of the condition and ultrasonography.

The treatment of the rudimentary horn pregnancy, whether complicated or not, classically involves foetal extraction, followed by resection of the rudimentary horn and of its homolateral tube.

## Conclusions

The rudimentary horn pregnancy is a very serious condition which may put the maternal life in danger. Improving the outcome is based initially on the diagnosis and pre-conceptual care for this malformation. The treatment will consist of an urgent laparotomy with foetal extraction and excision of the ruptured horn in order to avoid a repeated, potentially more severe incident.

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