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**Case Report**

# Pregnancy in rudimentary horn

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## ABSTRACT

Pregnancy in rudimentary horn is rare occurrence with incidence of less than 1 in 150,000. Pregnant rudimentary horn can present with wide range of symptoms that may be similar to ectopic pregnancy or may remain silent with features of normal pregnancy. Management is typically resection of the rudimentary horn and the ipsilateral fallopian tube by either laparotomy or laparoscopy.

**Keywords:** Pregnancy, Rudimentary horn, Unicornuate uterus

## INTRODUCTION

Latto et al described the rudimentary horn of pregnancy.[1] Incidence of pregnancy in rudimentary horn is as low as 1 in 140,000.[2] Due to rarity of such cases very few literatures are found to be reported. It is a life-threatening entity with a 50% risk of uterine rupture. With advances in prenatal ultrasound in recent decades, there may be an opportunity to detect rudimentary horn pregnancy earlier, resulting in a lower incidence of maternal morbidity and mortality. Here, we report a case of unicornuate uterus with non-communicating pregnant rudimentary horn diagnosed in first trimester.

## CASE REPORT

A 31 years Gravida 2 para 1 living 1 with 8 weeks of gestation reported to us after home urine pregnancy test was positive. There were no complaints of pain abdomen, spotting or bleeding per vagina. She is a known case of type 2 diabetes mellitus and hypothyroidism on medication. She underwent elective LSCS at 37 completed weeks for breech presentation our hospital 2 years back.

In our hospital, on general examination her vital signs were stable. Physical and per abdominal examination was normal. Trans-vaginal ultrasound showed empty uterus of size 8.4×4.5×4.7 cm with thickened endometrium of 18 mm. A well-defined gestational sac of 2.7 cm with CRL of 1.9 cm with FHR of 160 bpm surrounded by myometrium of 6 mm was noted in right adnexa. Bilateral ovaries were normal, corpus luteum seen in right ovary. Above findings were suggestive of ectopic pregnancy.

In her previous delivery discharge summary, it was mentioned in the operative notes that she had a left unicornuate uterus with right non communicating rudimentary horn. Hence a provisional diagnosis of pregnancy in rudimentary horn was made and was planned for laparoscopy.

Intra-operatively a left unicornuate uterus of size (6.5×5.5×4.5 cm) with normal ovary and fallopian tube was found. To the right there was a rudimentary horn of uterus with pregnancy (5×4×4.4 cm) with normal fallopian tube, ovary, and round ligament attached to its right side. There was a single cervix and single vagina. So, the diagnosis of left unicornuate uterus with non-communicating pregnant rudimentary horn was confirmed. The horn was attached to right lateral lower one third of uterus just above the utero vesicle reflection of visceral peritoneum by a thick fibrous band. Right

rudimentary horn excision along with right fallopian tube was done after cauterizing and cutting the right round ligament and ovarian ligament and fibrous band attached to uterus. Specimen was retrieved through one of the ports and sent for HPE. Blood loss was minimal. Patient recovered well from surgery and was discharged on next day. HPE correlated with clinical diagnosis of ectopic pregnancy.

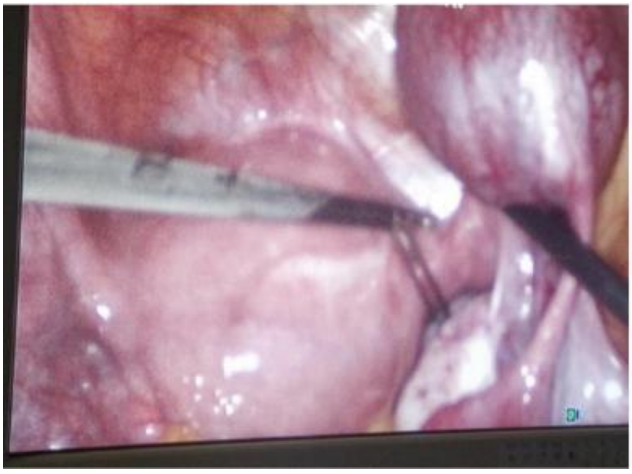

**Figure 1:**

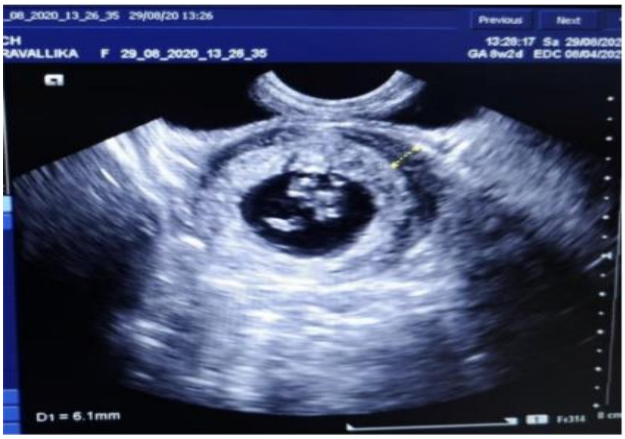


**Figure 2:**

## DISCUSSION

A unicornuate uterus with a rudimentary horn is a variant of mullarian anomaly that results from the failure of one of the Müllerian ducts to develop completely and an incomplete fusion with the contralateral side. The incidence of uterine congenital anomalies because of Mullerian defects in the normal fertile population is 3.2%. An unicornuate uterus accounts for 2.4-13% of all Mullerian anomalies. 70 to 90% of the rudimentary horns are non-communicating with the cavity. Although, 1/3rd of women has associated renal anomalies but with our case the renal scan was normal.[6]

According to ASRM, unicornuate uterus is a type 2 classification with unilateral hypoplasia or agenesis that can be further sub-classified into communicating, non-communicating, no cavity, and no horn. Latest classification of Mullerian anomalies by ESHRE-ESGE IN 2013 (Grimbizis et al) classify unicornuate uterus to class U4a/Hemi uterus with a rudimentary (functional) cavity.[4] The male gamete/fertilized ovum may migrate trans-peritoneally to the contralateral noncommunicating unicornuate horn resulting in pregnancy.[3]

Uni-cornuate uterus with rudimentary horn may be associated with gynecological and obstetric complications like infertility, endometriosis, hematometra, urinary tract anomalies, miscarriages, preterm deliveries, malpresentations, placental abruption, placenta previa, adherent placenta due to poor musculature, labour dystocia, intra uterine growth retardation.

Rudimentary horn pregnancy should always be considered as a differential diagnosis of tubal pregnancy, cornual pregnancy, and intrauterine pregnancy in a bicornuate uterus. Ultrasound is a sensitive tool for initial diagnosis. Tsafrir suggests USG criteria for the early diagnosis of rudimentary horn pregnancy[5] (1) pseudo-pattern of an asymmetrical bicornuate uterus, (2) absent visual continuity between the cervical canal and the lumen of the pregnant horn, and (3) the presence of myometrial tissue surrounding the gestational sac. In the case presented here, a rudimentary horn pregnancy was suspected following ultrasound and was confirmed from the previous documented operative notes that she had a non-communicating rudimentary horn. MRI is another non-invasive and useful diagnostic tool for mullerian anomalies without the hazard of radiation.

An early diagnosis is crucial since uterine rupture due to poor musculature of the rudimentary horn is a frequent, life-threatening complication. However, diagnosis is difficult because the women concerned have often had a previous normal delivery.

Management consists of excision of the pregnant rudimentary horn and ipsilateral fallopian tube, traditionally by laparotomy. The first case of using laparoscopy was reported in 1996, and the horn was resected through a vaginal incision.[7] With the advancement of laparoscopy, it may be an attractive option given the advantage of early recovery. As in our case diagnosis was made early diagnosis at 8 weeks of gestation therefore, laparoscopy was the preferred choice for surgery.

## CONCLUSION

To conclude routine early pregnancy scan and documentation of operative findings made us to diagnose and treat the condition. In conclusion, rudimentary horn pregnancy is a rare condition that may be misdiagnosed prior to surgery. Ultrasound in the first trimester may provide a means of an early diagnosis. MRI may provide additional confirmation.

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