

Case Report

## Live near term birth in a rudimentary horn pregnancy-A Case Report

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**Abstract:** Incidence of pregnancy in the non- communicating rudimentary horn is 1 in 76,000-150,000 pregnancies A non- communicating rudimentary horn pregnancy reaching term is also very rare and there are only 13 fetal survivals reported since 1960. Only 10% of these pregnancies reach term with 2% newborn survival rate .it is in this context that our case report attains significance. Our patient had a rudimentary horn pregnancy with placenta preavia that continued to 36 weeks and had a classical caesarean section with excision of rudimentary horn and a live male fetus.

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

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### INTRODUCTION

Congenital anomalies of the uterus are due to abnormal mullerian development [1]. Unicornuate uterus with rudimentary horn is a very rare type of uterine anomaly.80% of these cases have no communication between the developed horn and the under developed rudimentary horn [2]. Incidence of pregnancy in the non- communicating rudimentary horn is 1 in 76,000-150,000 pregnancies [3]. A non-communicating rudimentary horn pregnancy reaching term is also very rare and there are only 13 fetal survivals reported since 1960 [2]. In our case we had a live birth at 36 weeks from a rudimentary horn pregnancy

### CASE REPORT

MrsX, 24yr old second gravida with one live baby by emergency caesarean section, with expected date of confinement on September 30 was registered in our hospital for antenatal check up from 10 week of index pregnancy. The usg done at 12 weeks showed a bicornuate or septate uterus. She was followed up with repeated ultra sound at 18 weeks which again showed anomalous uterus with developing fetus in one horn and no obvious congenital anomalies but the amniotic fluid index was only 7 cm, with placenta entirely covering the os. The ultra sound at 22 weeks showed gross Oligamnios but the fetus was viable. Due to lack of liquor, anomalies could not be looked for. At 27 weeks

of gestation the patient was admitted with severe abdominal pain which was treated symptomatically .But subsequent to this episode of acute abdomen the liquor volume started to improve and no gross anomalies were detected. At 34 weeks the ultra sound showed a singleton gestation corresponding to gestational age with breech presentation, amniotic fluid index of 12 and completes placenta preavia more to the anterior wall.

During the previous pregnancy the accessory horn was detected while doing emergency caesarean section forprimi breech with Oligamnios and preterm premature rupture of membranes. The per operative findings were a term uterus with a small appendage like rudimentary horn. Removal of the horn was not attempted as the caesarean was performed late at night and adequate precautions and work up was not done. The patient was advised follow up after caesarean section but the patient did not come for follow up in between pregnancies.

The patient was posted for elective caesarean section with all necessary precautions taken. On opening the abdomen, the fetus was found in the rudimentary horn which was thinned out and fetus was delivered by classical caesarean incision .the fully developed horn was found normal with the previous caesarean scar. The rudimentary horn with the right fallopian tube was removed with placenta in situ. Both

ovaries found to be normal. There was blood loss of 2.5 liters and one unit of compatible blood was transfused intra-operatively.

The baby was near term male baby which had external defects probably due to amniotic band sequence which showed microphthalmos and limb deformities on the right side

The mother and the baby were in good general health post operatively and were discharged on the 10<sup>th</sup> post-operative day Post-operative check-up after six weeks was satisfactory

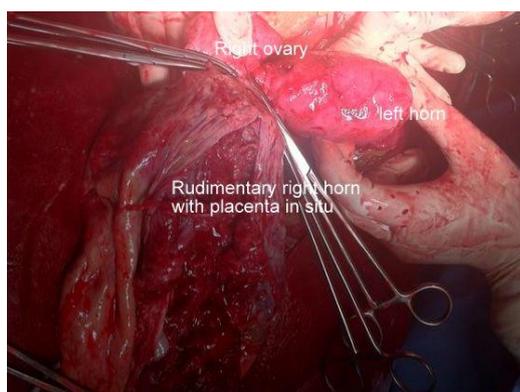


Fig-1:

## DISCUSSION

The congenital abnormalities of uterus due to abnormal embryogenesis of mullerian duct system relatively common and this is seen in 2 % -4% of females with normal reproductive outcomes. The prevalence of anomalies is seen to be more in women who are treated for infertility [1]. Unicornuate uterus with rudimentary horn is a very rare type of mullerian abnormality and is classified as class 2 abnormality according to the classification put forward by American Society of reproductive Medicine. In 80% of such cases there is no communication between the normal horn and rudimentary horn [3].

The commonest mullerian abnormality described is septate uterus with incidence of 35 % of mullerian abnormalities. This is followed by bicornuate uterus (25%) and arcuate uterus (20%) [4]. Rudimentary horn pregnancy with pregnancy reaching term with live birth is very rare with only 13 fetal survivals after 1960 [2]. The maternal mortality also is less than 0.5%, and is mainly due to rupture of the rudimentary horn [1].

The first described pregnancy in rudimentary horn was made by Mauriceau in 1669 .there has been less than 1000 pregnancies reported all over the world in non- communicating rudimentary horn Only 10% of these pregnancies reach term and only 2% newborn

survival rate [1]. It is in this context that our case report attains significance. Ultrasonography criteria for diagnosis of rudimentary horn pregnancy by Tsafirir *et al.* are a) a pseudo pattern of a asymmetrical bicornuate uterus b) absent visual continuity tissue surrounding the gestation sac and the uterine cervix and c) presence of myometrial tissue surrounding the gestation sac(5)But sensitivity of ultra sound in diagnosis is only 26% and this further decreases as pregnancy advances [6]. Renal anomalies are associated with mullerian anomalies in 36% of cases [6].

The most dreaded complication of rudimentary horn pregnancy is rupture. The timing of rupture varies from 5 weeks to 20 weeks of gestation and as the gestational age advanced the mortality also increases [6]. A study published in oxford journals has concluded that ultra sound and HSG are useful for initial diagnosis and they are inconclusive regarding the usefulness of MRI. So if the diagnosis is made pre natally it is better to do surgical resection of the rudimentary horn .But when the diagnosis is suspected during pregnancy MRI may be useful to come to an early diagnosis. In our case though the patient underwent caesarean in the previous pregnancy the diagnosis was not confirmed as the procedure was done as an emergency at night and the patient also failed to report for follow up.She presented to us after conceiving the second time. So the diagnosis of rudimentary horn pregnancy would be difficult in our case and we were under the impression that the pregnancy was in one of the horns of the bicornuate uterus as this was the impression obtained by the previous operating surgeon. A study from Saudi Arabia by turkia *et al.* suggests that previous caesarean section for breech might be an etiological factor for rudimentary horn pregnancy [7].

Literature also gives strong association of adherent placenta previa with uterine anomalies. The endometrium of the uterine rudimentary horn is found to be thinner and there is seen to be abnormal placentation as placenta accrete These two factors further increases the incidence of rupture [5]. In our case we had a preoperative diagnosis of central placenta previa and hence we performed a classical caesarean section on the rudimentary horn with- out disturbing the placenta. We then proceeded with resection of the horn in total with the placenta in situ. This helped us to decrease the torrential bleeding that could have increased the morbidity and the mortality of the case. A similar case of pregnancy of rudimentary horn continuing to term with placenta accrete was published by A *et al.* [4]. The pregnancy reported by Chopra *et al* was in second trimester [8].

Another danger of such undiagnosed rudimentary horn pregnancy is usage of misoprostol for termination [6]. In our case also if we had decided on

termination of pregnancy at 18 weeks when there was absolute absence of liquor then we would have had rupture of uterus with maternal mortality the presence of complete placenta preavia in a previous caesarean section patient made us use caution on the decision.

#### CONCLUSION

- Definitive corrective procedure should be undertaken to correct the mullerian anomalies when- ever possible as such a pregnancy can lead to rupture that can lead to maternal mortality.
- If pregnancy of a rudimentary horn is diagnosed early in pregnancy then definitive surgical procedures should be undertaken for resection of horn rather than wait for catastrophic rupture
- The presence of placenta preavia should be taken as a warning to look for anomalous uterus as there is strong association between both

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