



**A RARE CASE OF TWIN GESTATION IN A NON-COMMUNICATING
RUDIMENTARY HORN OF UNICORNUATE UTERUS**

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Abstract :

Pregnancy in rudimentary horn is a rare entity and carries grave consequences to the mother. An incidence of 1 in 150000 pregnancies has been reported in the literature. A rare case of diamniotic twin gestation 14 wks in the non-communicating rudimentary horn of a unicornuate uterus is reported in Institute of Obstetrics Gynecology, Women Children Hospital, Chennai. Patient presented with vaginal bleeding. Early diagnosis and prompt exploratory laparotomy, where excision of the unruptured rudimentary horn prevented maternal mortality and morbidity.

Keyword : unicornuate uterus, rudimentary horn pregnancy, non-communicating rudimentary horn

CASE REPORT A 21 year old primigravida with history of 3 months amenorrhea presented to the casualty with complaints of bleeding per vaginum of 5 hours duration and mild abdominal

discomfort. Her vitals and general condition was stable. Vaginal examination showed a mid positioned cervix, normal sized uterus with right forniceal fullness with tenderness and minimal spotting at the time of examination. Her hemoglobin was 9gm/dl, PCV 28, platelets 1.5lakhs/c.mm, renal function tests were normal. Her BP was 100/70mmhg, PR was 90/mt. Ultrasound examination done the day before admission done elsewhere revealed twin gestation without cardiac activity in the right adnexa. An ultrasound examination was repeated again after admission showed diamniotic twin fetuses of 11 weeks GA without cardiac activity seen adjacent to the uterus probably arising from the right adnexa and empty uterine cavity. No free fluid collection was noted in the abdominal or pelvic cavity. Hence a diagnosis of unruptured ectopic pregnancy was made and patient was taken up for emergency laparotomy. Under general anaesthesia, abdomen was opened through SPT incision, Per-operative findings:

Left unicornuate uterus with tubes and ovaries
 Right side rudimentary horn : enlarged and surface appears intact, attached to the other cornua with a fibrous band (figure 1) Right tube and ovary seen The unruptured horn with the gestational sac was excised in toto, leaving behind the tube and ovary Cut section of the excised horn showed diamiotic twin pregnancy with a single placenta (figure 2). Postoperatively one unit of whole blood transfused. Post operative period was uneventful; hence patient was discharged on the eighth post operative day and advised to report in case of amenorrhea and folic acid intake. HISTOPATHOLOGY: Rudimentary horn with hyperplastic endometrium, decidua and placental tissue.



Figure 1. Unicornuate uterus with intact rudimentary horn

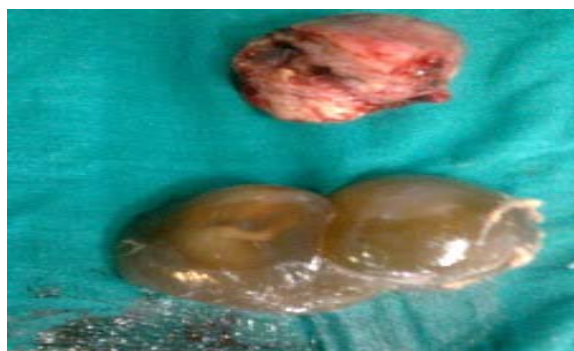


Figure 2. Excised horn, twin gestation with two separate sac

DISCUSSION The unicornuate uterus is formed when 1 müllerian duct completely or incompletely fails to elongate while the other develops normally. It is a lateral fusion defect. Unicornuate uterus accounts for approximately 2.4-13% of all müllerian anomalies. [1,2,3] The AFS (American Fertility society) classification divides class II (unicornuate uterus) into 4 categories based on the presence or absence of a rudimentary horn. The accessory horn can have a uterine cavity with functional endometrium, and, in some cases, a communication may exist with the main endometrial cavity. Associated urologic anomalies are frequent (44%), especially in the presence of an obstructed horn. Associated urological anomalies include ipsilateral renal agenesis (67%), horseshoe kidneys (8%), and ipsilateral pelvic kidney (15%).[4] Noncommunicating rudimentary horns that have an endometrial cavity are the most common unicornuate subtype and are the most clinically significant. This subtype is associated with increased morbidity and mortality. When the accessory horn becomes obstructed, several complications, such as hematometra, can develop. There is also an increased risk of developing endometriosis, which usually resolves after excision of the horn, provided that an early diagnosis was rendered [5,6]. Unicornuate uterus had the poorest overall reproductive outcomes of all the uterine anomalies. Problems with reproduction were attributed to abnormal uterine vasculature and diminished myometrial mass of

the unicornuate uterus. Analysis of 393 pregnancies revealed the following outcomes for the entire unicornuate class: 170 (43.3%) preterm deliveries, 213 (54.2%) live births, 17 (4.3%) ectopic pregnancies, and 135 (34.4%) spontaneous abortions. About 2% of the pregnancies occurred in the rudimentary horn. [7]. Adverse obstetric complications can also involve the accessory horn and include ectopic pregnancy, missed abortion, and uterine rupture [8]. For these reasons, the horn should be excised prior to pregnancy as a preventative measure. Pregnancy in a noncommunicating rudimentary horn is very rare and its reported incidence is 1 in 100,000. It is postulated to be due to transperitoneal migration of sperm into the fallopian tube of the rudimentary horn. Most obstetric complications occur in the first 20 weeks and can result in abortion, uterine rupture, or maternal death (0.5%) [9,10,11,12].

Diagnosis of unicornuate uterus:

Women with noncommunicating, functioning rudimentary horns may present with pelvic pain usually secondary to hematometra or endometriosis. Although HSG is useful in diagnosing a unicornuate uterus, it does not help in detecting a noncommunicating horn. MRI reliably helps in making this distinction and should be one of the first diagnostic tools used in evaluating such patients. MRI reveals a slender, laterally deviated banana-shaped uterus. Only 1 fallopian tube is identified. The zonal anatomy is normal, though the uterine volume is reduced. The accessory horn can appear solid because it is not opacified when endometrium is absent. It is located adjacent to the main uterine cavity. It can also be observed as a soft tissue mass. When endometrium is present, a small cavity can be detected; this may or may not communicate with the main endometrial cavity [13 - 18]. High-resolution ultrasonography is useful for identifying rudimentary

horns and is more reliable than laparoscopy for determining whether the horn is communicating or not. Tsafir et al outlined a set of criteria for diagnosing pregnancy in the rudimentary horn [19]. These include: A pseudo pattern of asymmetrical bicornuate uterus. Absent visual continuity tissue surrounding the gestation sac and the uterine Cervix. Presence of myometrial tissue surrounding the gestation sac. Laparoscopy is rarely indicated in the workup of an obstructed, noncommunicating horn. [20] Additional studies should include IVP or renal ultrasonography to help evaluate for ipsilateral renal agenesis, horseshoe kidney, and ipsilateral pelvic kidney [21]. The usual outcome of rudimentary horn pregnancy is rupture in second trimester in 90% of cases with fetal demise [22], however cases of pregnancy progressing to the third trimester and resulting in a live birth after caesarean section has been documented [23]. It is recommended by most that immediate surgery be performed whenever a diagnosis of pregnancy in a rudimentary horn is made even if unruptured [24]. However, conservative management until viability is achieved has been advocated in very select cases with larger myometrial mass, if emergency surgery can be performed anytime and the patient is well-informed [25].

FOLLOW UP:

The patient has been followed up till date. The patient has conceived spontaneously again and as on 21.12.2011 her gestational age is 9 wks and 3 days. Ultrasound abdomen/pelvis has confirmed single live intra uterine pregnancy. Renal anomalies which are frequently associated in such cases were not seen in this patient. **CONCLUSION:** High index of clinical suspicion,

early diagnosis and accurate management not only reduces mortality, also improves operative and future reproductive outcome.

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