Case Report No. 1

A rare case of ruptured ectopic pregnancy in rudimentary horn of unicornuate uterus

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Abstract :

Congenital uterine anomalies have a profound impact on reproductive outcomes. The unicornuate uterus accounts for approximately 20% of all congenital uterine anomalies. Unicornuate uterine anomalies with non-communicating rudimentary horns are at risk of developing ectopic pregnancy in the rudimentary horn. Given increased risk of uterine rupture, rudimentary horn pregnancies pose significant threat to maternal health. We present one such case presented with Acute abdomen due to rupture in second trimester.

Key Words : Ruptured ectopic, Rudimentary horn, Unicornuate uterus, Second trimester rupture

Introduction : The incidence of mullerian duct anomalies in general population is found to be 3.2%. Unicornuate uterus occurs in 1 in 4020 women in the general population and a rudimentary horn is present in about 84% of the cases[1]. The incidence of pregnancy in the rudimentary horn is approx 1:100000 to 1:140000[2]. Pregnancy in a rudimentary horn of unicornuate uterus occurs commonly in a noncommunicating cavitary horn. Its ruptured form is even rarer. It usually ruptures during first or second trimester of pregnancy. It is frequently missed on routine ultrasound. In majority of cases, it is detected after rupture and hence requires high index of suspicion on physical examination. It is managed by laparoscopy or laparotomy by excision of rudimentary horn. The first case was reported by Maricean in 16693,[4]. Pregnancy in the rudimentary horn usually ends in rupture during second trimester in about 90% of the cases. It is a life-threatening entity with a 50% risk of uterine rupture[5].

We present a case of ruptured right rudimentary horn of a unicornuate uterus at 17 weeks of gestation.

Case Report : 24 years old lady , G2P1L1 with 4 months of amenorrhea brought by relatives on 20/ 01 /17 at 10 pm with Acute Abdomen. To start with, earlier in the morning she developed pain in lower abdomenwhich was acute in onset, severe, agonizing in nature. It worsened within 1- 2 hrs& radiated to the shoulder at the time of presentation. She also started PV spotting since then and had one episode of vomiting. There was also history of syncopal attack. For these complaints she had been hospitalized in trust hospital, where she was transfused 3 PCV , 4 FFP & intravenous fluids for shock . She was stabilized over there and then referred to our hospital for further management. There was no history of fall/ trauma / lifting of heavy weight, no history of hematemesis / malena, no history of dysuria/ hematuria, no history of fever/ cough/ cold, no history of loss of consciousness.

On examination the general condition was poor and patient was in agony- perspiring. Patient had cold extremities with a thready pulse of 134 bpm, blood pressure of 90/70 mm Hg, respiratory Rate of- 20 cycles/ min, shallow breathing with marked pallor. On abdominal examination, Abdomen was grossly distended up to xiphisternum.Linea nigra was present, Umbilicus flat, no scar marks/dilated veins seen. Abdomen was tense, rigid with marked tenderness. Fluid thrill was present on percussion and bowel sounds were sluggish. On per speculum examination, cervix was bluish in colour, changes suggestive of pregnancy, minimal bleeding was present. Per vaginal examination revealed cervix soft to firm in consistency, os

closed, cervical movement tenderness was present, forniceal fullness & tenderness was present. Exact size of uterus could not be assessed due to extreme tenderness. Culdoscentesis was performed under all aseptic precautions which revealed a bloody tap. Foley's Catheter was already in place (catheterised at previous hospital). UPT was positive.

Blood sample was collected for all pre-operative investigations and for cross matching.

CBC was showing - Hb- 7.6 gm%, TLC – 10,800/mm3, Platelet count – 91,000 / mm3. Blood Group was B positive. BT- 3min30sec CT – 4 min 20sec.

PT – 18.1 INR – 1.23, BSL (R)– 96 mg%,

Liver function test showed - Sr Bil. (T)- 2.6 mg/dl ,(D) 1.5mg/dl, SGOT – 114.9 IU/L SGPT- 68.6 IU/L, Alk Po4 – 75.9 IU/L.

Renal function test - Sr Urea – 60.1mg/dl , Creat -1.6mg/dl, Na+ 129mmol/l, K+ 5.2mmol/l.

HIV : Non reactive, **HBsAg :** Negative, **VDRL :** NR,

Ultrasonography (abdomen & pelvis)revealed -

- Extrauterine G-sac with absent fetal cardiac activity
- Placenta was homogenous, implanted posterioinferiorly to extrauterine Gsac.
- Bulky uterus with normal endometrial cavity
- Gross ascites with thick echos s/o haemoperitoneum.
- Impression-Ectopic (secondary abdominal) pregnancy of 17 weeks gestation with non living fetus with haemoperitoneum.

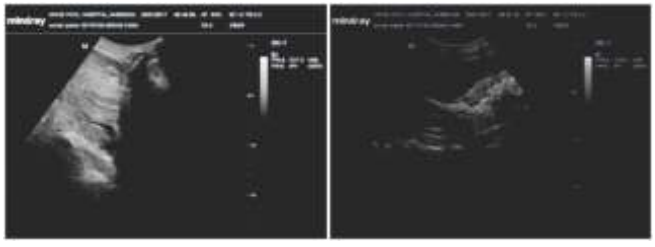

Figure 1 – USG images showing a) Normal endometrial cavity, b) Placenta in peritoneal cavity, c) Fetus in peritoneal cavity d) Hemoperitoneum

In view of secondary abdominal pregnancy with massive hemoperitoneum which was confirmed on USG, keeping adequate blood & FFP ready patient was posted for emergency exploratory laparotomy. High risk was explained to relatives & husband. Patient was immediately shifted to OT. Patient was induced with general anesthesia. Midline infraumbilical vertical incision taken. Abdomen opened Amniotic sac ruptured & amniotic fluid drained out followed by delivery of abortus and placenta. There was evidence of hemoperitoneum. After draining major portion of hemoperitoneum along with clots, further exploration done which revealed ruptured uterine horn on right side.It was Right Rudimentary horn (Non-Communicating with functional endometrial cavity) with Unicornuate uterus on left side.Rudimentary horn along with ipsilateral fallopian tube was clamped and cut. Pedicles ligated with Vicryl no.1. After draining hemoperitoneum completely, warm saline wash was given until clear fluid was observed.Drain was kept .Confirming hemostasis, abdomen was closed in layers.Estimated blood loss was around 1.5 lit blood with 800gms clots. Intra-operatively, patient received 1 PCV along with IV fluids.Patient was shifted to SICU. Immediate Post-procedure, 2 FFPs were transfused.

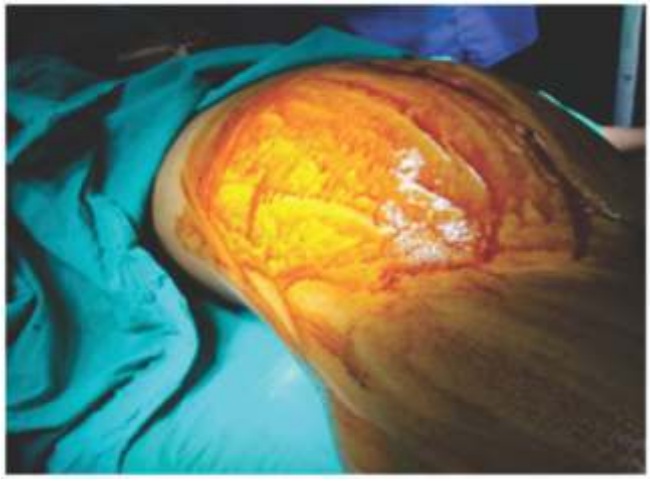

Figure 2 – Pre-op picture of grossly distended abdomen.

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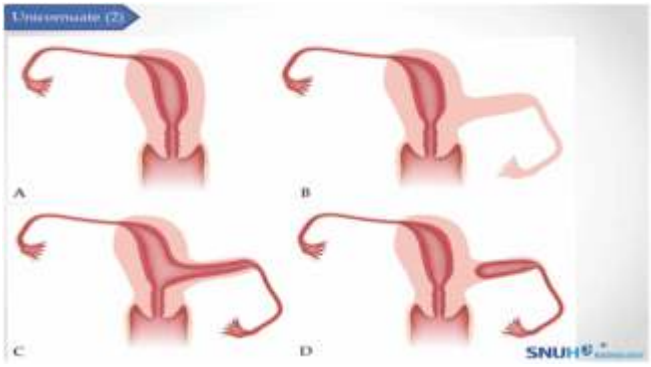
Figure 4- Specimen showing Abortus with placenta, Excised Rudimentary horn with FT and clots

Discussion : Unicornuate uterus is a uterus that has a single horn. Approximately 65% of women with unicornuate uterus also have a second smaller or rudimentary uterine horn on opposite side.Most rudimentary horns are non communicating (90%).Unicornuate uterus results due to partial or complete failure of development of one of the paramesonephric ducts. Partial development gives rise to a rudimentary uterine horn which can be further subclassified in to communicating, noncommunicating, no cavity, and no horn.[1] Pregnancy in a non-communicating rudimentary horn occurs through the transperitoneal migration of the spermatozoon or the fertilized ovum, as evidenced by the 10 % prevalence of a corpus luteum on the contralateral side[2]. The timing of rupture of such pregnancy varies from case to case because of the varied muscular constitution in the thickness and distensibility of the wall of the rudimentary horn. Rupture of such pregnancy often occur in second or third trimester which in most cases results in life threatening hemorrhage leading to shock[6,7].



In general population, the incidence of mullerian duct malformations is 4.3%. The prevalence of unicornuate uterus in the general population is 0.1% [8]. Rudimentary horn pregnancy occurs in approximately 1/76,000 to 1/ 1,50,000 pregnancies. Among all the uterine anomalies unicornuate uterus carries poor fetal survival rate. The reproductive performance of women with unicornuate uterus is poor, with alive birth rate of only 29.2%, prematurity rate of 44%, and an ectopic pregnancy rate of 4%[9].The risk of uterine rupture is 50 to 90%, with most ruptures (approximately 80%) occurring by the end of the

second trimester. On the side opposite the unicornuate uterus there may be a horseshoe or a pelvic kidney, or the kidney may be hypoplastic or absent. If pregnancy occurs in the rudimentary horn &not detected early there will be rupture of the horn leading to sudden & severe intraperitoneal haemorrhage and shock. Death may occur if not treated vigilantly.

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