

# A Rare Case of Spontaneous Rupture of a Gravid Bicornuate Uterus in a Primigravida

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**Abstract:** *Background-* Rupture of uterus is an acute obstetric emergency. Rupture of a uterus in a primigravid woman is very rare and generally associated with congenital uterine malformations like bicornuate uterus. *Cae-* A 26 year primigravid patient was admitted to our institute as a case of primary PPH following home delivery in shock with haemoperitoneum. After exploration in operation theatre bicornuate uterus with rupture of the left cornu of the uterus was found, which was repaired in layers. The patient recovered and post delivery period was uneventful. **Conclusion:** This case emphasises the need of antenatal check-up, USG and high degree of suspicion and proper management which can reduce this type of grave complication and prevent maternal mortality and morbidity.

**Keywords:** Rupture, Spontaneous, Bicornuate uterus, Pregnancy, Primi-gravida

## 1. Introduction

Mullerian duct abnormalities occur in around 0.4 % of woman.<sup>1</sup> Bicornuate uterus accounts for about 25% of all the Mullerian duct anomalies. The exact aetiology still remains unknown. Bicornuate uterus is formed by incomplete fusion of bilateral Mullerian system. Infertility is a very common complication of this. Pregnancy in a bicornuate uterus is rare and even if occurs chance of miscarriage, abortion, preterm labour. Transvaginal ultrasound, sonohysterography, hysterosalpingography, magnetic resonance imaging (MRI) and hysteroscopy are different investigation needed to diagnose this condition. In most of the cases, uterine anomalies are first recognized during pregnancy as this is the first time most of the women get their first ultrasound done. This is a rare case report of rupture of bicornuate uterus of a term pregnancy with rupture left cornu at its medial site detected after vaginal delivery at home.

## 2. Case Report

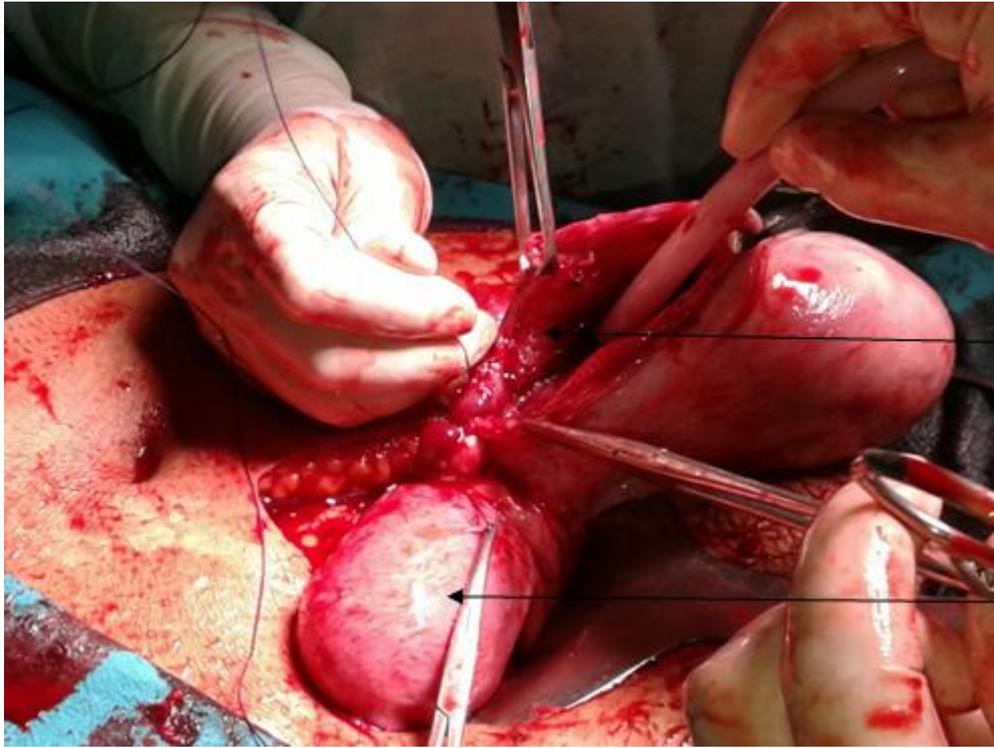
A 26 year old Mrs. ABC wife of Mr. XYZ, a rural resident, housewife by occupation was admitted in the hospital in emergency room after home delivery with post-partum haemorrhage in shock. It was her 1st pregnancy following 3yrs of marriage and she did not remember her last menstrual period date but it was 9months completed according to her family members. There was no previous antenatal check-up, nor any ultrasound. Following delivery of a 2.6kg live male baby at home around at 10 am there was massive bleeding and patient was taken to a nearby PHC from where she was referred after securing an IV line. The patient reached the institute at around 12.30pm of the same day.

On examination, her BP was 80/50 mm Hg, Pulse was 122/min, temperature was normal. She was very pale, but there was no cyanosis, jaundice, oedema or clubbing. Patient

was alert but semi-conscious, partly responding to commands. Per abdominally, abdominal distension with guarding and rigidity was found suggestive of acute abdomen. Uterine size could not be assessed. Per vaginally gush of bleeding was found. Cervix was high up. First degree perineal tear was also noted.

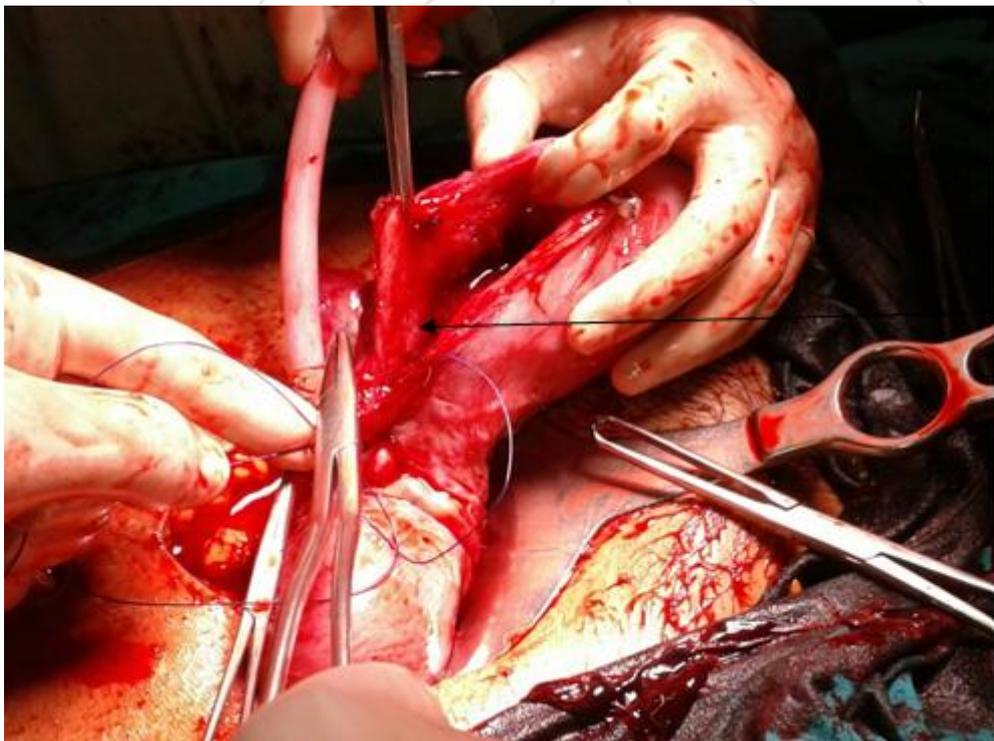
Patient was immediately resuscitated with 2 IV fluid Ringer lactate and plasma volume expander after securing 2 wide bore IV cannula. Emergency Hb along with complete haemogram, LFT, KFT, Urine R/E, BT, CT was sent. Hb came to be 5.4 gm%, BT and CT were 2' 35" and 3' 34.50" respectively, random blood glucose 104 mg/dL and 3 unit cross-matched blood was arranged. Anaesthetists were informed and patient was immediately shifted to OT.

In OT after explaining the patient party about the very high risk and complications of the patient and getting a very high risk consent laparotomy was started under General anaesthesia. After opening the abdomen haemoperitoneum with lots of clots were found. After suction and removal of the clots a bicornuate uterus with its left gravid cornu was found. In its medial aspect a big rent of around 7 cm\* 3cm was noted which was repaired by haemostatic bites. Even after securing the rupture site, uterus was still flabby and per vaginal bleeding continued. Uterine massage with IV fluid Ringer lactate with 30 unit oxytocin along with IV methergin and Injcarboprost was given. Uterus was still atonic. Some parallel compressive uterine suture was given to make the uterus contracted. Bleeding got controlled. After saline wash abdomen was closed in layers. Perineal tear was repaired. 3 unit PRBC was transfused intra operatively and 2 units PRBC post operatively. Post-operative period was uneventful. On the 7<sup>th</sup> post op day she was discharged. Before discharge she was counselled about the need of antenatal check up in the future pregnancy and puerperal care for the present delivery was advised.



Rupture of left cornu

Unaffected right cornu



Repairing of the rupture site



After repair



Compressive suture

### 3. Discussion

Bicornuate uterus (bicornisunicollis) is a double uterus with a single cervix and vagina which results from the failure of the embryo genetic fusion of part of the Mullerian ducts. Each uterus has a single horn linked to the ipsilateral fallopian tube that faces its ipsilateral ovary.<sup>2</sup> Most of the women with these conditions are asymptomatic and unaware of having a double uterus until some reproductive problems such as recurrent mid-trimester abortions are encountered.<sup>3</sup> Study by Heinonen<sup>4</sup> showed that dysmenorrhea and dyspareunia are common gynaecological problems in them.

Due to the structural defect, rate of conception is very low and even if conception occurs chance of early and mid-trimester pregnancy loss is very high as the defective uterus can not grow in pace with the developing foetus, defective implantation and improper vascular supply to the foetus. The walls of the abnormal uteri become abnormally thin as pregnancies advance, and the thickness can be inconsistent over different aspects of the myometrium.<sup>5</sup>

Along with transvaginal ultrasound, sonohysterography, hysterosalpingography, magnetic resonance imaging (MRI) and hysteroscopy a new advance in detecting this condition is 3-D ultrasonography. Pregnancy with bicornuate uterus needs special attention as premature birth and malpresentation are common. Caesarean section rate is very

high.<sup>5</sup> Post-delivery complications like PPH are very common as the malformed uterus can't contract properly. Sepsis also increases due to increased operative interference.

Rupture of a bicornuate uterus in pregnancy is a rare and often catastrophic complication with a high incidence of foetal and maternal morbidity. Rupture in such cases occurs because of inability of malformed uterus to expand as a normal uterus. Ravasia et al<sup>6</sup> in his study reported an 8% incidence of uterine rupture (2 of 25) in women with congenitally malformed uteri compared with 0.61% (11 of 1,788) in those with normal uteri (P =.013) attempting VBAC.

#### 4. Conclusion

Uterine abnormalities including bicornuate uterus is associated with many gynaecological and reproductive problems. Pregnancies in these patients are not only very precious but also very delicate and pose high risk to both mothers and the babies. Proper antenatal check-ups, routine ultrasound, institutional delivery and vigilant monitoring of foeto-maternal well-being along with specialized obstetric

care reduces both maternal and perinatal morbidity and mortality to a great extent.

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