

An Unusual Case of Rupture of Left Horn of Bicornuate Uterus at Twelve Weeks of Gestation

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ABSTRACT

Rupture of uterus is a hazardous complication of pregnancy and labour, and carries a high risk for the mother and the fetus. Uterine rupture during early pregnancy is a rare complication but if there is a rupture and not suspected within time, it may have a fatal outcome for the mother. Here we report a case of rupture of horn of bicornuate uterus at 12 weeks of gestation with severe anemia admitted with shock at Chalmeda Anand Rao Institute of Medical Sciences. Patient was successfully managed by emergency laparotomy with excision of the horn.

Keywords: Bicornuate uterus, rudimentary horn pregnancy, ultrasound

INTRODUCTION

Rupture of gravid uterus is mainly reported in multigravida or with previous scar, mostly in labour. The rupture at early gestation first and second trimester is very rare and mostly associated with uterine anomalies or cornual pregnancy. Depending on the type of uterine anomaly, the incidences of obstetrical complications vary. Bicornuate uterus is usually associated with pregnancy outcomes comparable to general population. Very rarely rupture uterus may occur, which may be associated with weak or deficient musculature of the anomalous uterus.

The occurrence of all types of Mullerian duct abnormalities is estimated to be around 0.4%.^[1]

Abicornuate uterus is estimated to occur in 0.1% - 0.5% of women. The incidence of bicornuate uterus is approximately 25% among the mullerian duct anomalies. The uterine anomalies are evaluated by investigative modalities like transvaginal ultrasound,

sonohysterography, hysterosalpingography, magnetic resonance imaging (MRI) and hysteroscopy. Recently 3D-ultrasonography has been advocated as an excellent method to evaluate uterine malformations.^[2] Diagnosing a case of rupture uterus in early gestation itself may pose a problem where the suspicion of rupture is low. As long as normal development occurs there may not be any abnormal features. The horn containing the gestational sac enlarges with the pregnancy, while the other horn, if felt, might be considered to be a fibromyoma. Malformations of the vagina such as septum may draw our attention to such anomalies in uterus. The differential diagnosis in such cases is between threatened miscarriage, ovarian torsion and a secondary abdominal pregnancy.

CASE REPORT

A 22 year old G2P1L1 was brought with complaints of pain abdomen since 3 days and an episode of syncope earlier in the morning with a history of 3 months amenorrhoea and admitted in June 2014 at



Figure 1: Bicornuate uterus

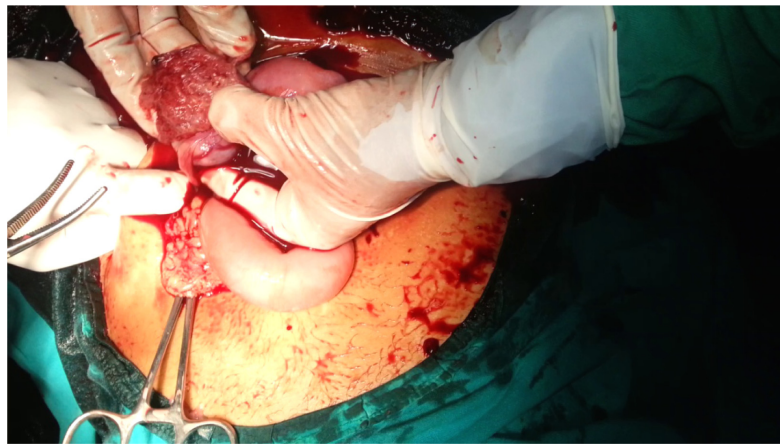


Figure 2: Ruptured left horn



Figure 3: Gestational sac with fetus

Chalmeda Anand Rao Institute of Medical Sciences, Karimnagar which is a tertiary care hospital catering to almost entire north telangana districts. She had undergone an uneventful full term cesarean section in January 2013 and delivered alive male baby. No uterine anomalies were mentioned in her previous ultrasound scan reports. Her previous menstrual history was normal.

On examination her general condition was poor, pallor present, pulse rate 110 beats /min, Blood pressure 90/50 mm Hg measured in the supine position and on auscultation lungs were bilaterally clear. Basic resuscitation measures, examination and investigations were done simultaneously for the patient. On abdomen examination, mild distension was present with guarding and rigidity; on vaginal examination, a mass was felt in left fornix, tenderness was present with the movement of cervix, and os was closed, with no bleeding. An emergency ultrasound scan revealed a normal sized uterus with central thick endometrium with no intrauterine sac. Left adnexa region showed a foetus corresponding to 12 weeks of gestation with absent cardiac activity and moderate free fluid in the peritoneal cavity. A provisional diagnosis of ectopic pregnancy was made and patient undertaken for emergency laparotomy.

On laparotomy, bicornuate uterus with ruptured left horn with gross haemoperitoneum of approximately 4 litres was noted. Right horn of uterus and tubes were normal. Left tube and ovary were normal. (Figure 1, 2, 3) Left ovary was conserved. Ruptured left horn was excised and the uterus was repaired in two layers with 1-0 vicryl. Gestational sac was removed in toto. Her post operative period was uneventful and stitches were removed on 8th postoperative day.

DISCUSSION

A bicornuate uterus is referred to a uterus in which the fundus is indented, arbitrarily defined as >1cm and the vagina is normal.^[3] Bicornuate uterus (bicornisunicollis) represents a double uterus with a single cervix and vagina resulting 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 ovary. This anomaly results from partial fusion of mullerian ducts which leads to a variable degree of separation of uterine horns that can be complete, partial or minimal.^[4] Pregnancy outcomes have been reported to be close to general population. However some develop complications like pregnancy loss (25%), preterm labour (15-25%), cervical insufficiency (38%), malpresentations and rarely rupture of uterus.^[5]

It is unusual to encounter rupture at early gestation during first and second trimester. These are usually associated with uterine anomalies. Similar case has been

reported by Mane et al.^[6] and Kore et al.^[7] Rupture in such cases occurs because of inability of malformed uterus to expand as a normal uterus. Uterine rupture may occur due to the weak or deficient musculature of the anomalous uterus. Incidence of pregnancy in rudimentary horn is 1/40,000 pregnancies.^[8] Chang et al.^[9] reported rupture of rudimentary horn as late as 25 weeks of gestation.

Treatment is usually removal of the ruptured horn. Since the scar is present in the upper part of the uterus, it is important to avoid pregnancy for at least 1 year. If pregnancy occurs it requires careful monitoring with early hospitalization and elective cesarean section.

CONCLUSION

Uterine anomalies are associated with increased incidence of obstetrical complications, some of which may be life threatening. Therefore diagnosis of a uterine anomaly and careful monitoring and follow up of the same is needed. Documentation of the anomaly and treatment given for any complication along with patient education is equally important for future management.

ACKNOWLEDGEMENT

We thank the faculty of Department of OBG for their support and the management of Chalmeda Ananda Rao Institute of Medical Sciences for allowing us to use and publish the hospital data.

CONFLICT OF INTEREST: None

SOURCE OF SUPPORT: None

REFERENCES

1. Nahum GG. Uterine anomalies. How common are they, and what is their distribution among sub-types. *J Reprod Med.* 1998; 43:877-87.
2. Salim R, Jurkovic D. Assessing congenital uterine anomalies: the role of three-dimensional ultrasonography. *Best Pract Res Clin Obstet Gynaecol.* 2004; 18:29-36.
3. Troiano RN, Mc Carthy SM. Mullerian duct anomalies: imaging and clinical issues. *Radiology.* 2004; 233:19-34.
4. The American Fertility Society classifications of adnexal adhesions, distal tubal occlusion, tubal occlusion secondary to tubal ligation, tubal pregnancies, mullerian anomalies and intrauterine adhesions. *Fertil Steril.* 1988; 49:944.
5. Parmar M, Tomar S. Bicornuate uterus: Infertility treatment and pregnancy continuation without cerclage: An unusual case. *Open J Obstet Gynecol.* 2014; 4: 981-985.
6. Mane S, Choudhary R, Nandawar Y. An unusual presentation of pregnancy in bicornuate uterus. *J Obstet Gynecol India.* 1994; 44: 154-5.
7. Kore S, Pandole A, Akolekar R et al. Rupture of left horn of bicornuate uterus at twenty weeks of gestation. *J Postgrad Med.* 2000; 46:39-40.
8. Sfar E, Zine S, Bourghida S et al. Pregnancy in a rudimentary uterine horn: Main clinical forms. 5 cases. *Rev Fr Gynecol Obstet.* 1994; 89:21-6.
9. Chang JC, Lin YC. Rupture of rudimentary horn pregnancy. *Acta Obstet Gynecol Scand.* 1992; 71:235-8.