Case Report

DOI: 10.17354/ijss/2015/196

Bicornuate Uterus with Pregnancy: A Case Report and Review of Literature

S Aruna[1], Aruna Subha Shree Rao Yellayi[1], G Sunanda Rani[2]

[1]Assistant Professor, Department of Obstetrics and Gynaecology, Andhra Medical College, Visakhapatnam, Andhra Pradesh, India, [2]DGO, Nikhita Hospital, Visakhapatnam, Andhra Pradesh, India

Abstract

The incidence of uterine malformations in general population is estimated to be about 3-5% and 5-10% in women with poor reproductive outcome. Fertility and evolution of pregnancy depends on the type of uterine anomaly. Many of them are asymptomatic but it is important to consider this diagnosis in recurrent miscarriages - early and late, preterm labors, malpresentations, intrauterine growth restrictions and menstrual disturbances like menorrhagia, dysmenorrhea. Septate and arcuate uterus represent approximately 75% of malformations while bicornuate, didelphys and unicornuate comprise the remaining 25%. Cases of pregnancy in a bicornuate uterus are still of sufficient interest and rarity to justify being reported. We report a case of bicornuate uterus with two successful pregnancies and diagnosed at 30 weeks gestation in third pregnancy with intrauterine demise by ultrasound examination.

Key words: Bicornuate uterus, Pregnancy, Uterine malformation

INTRODUCTION

Abnormal fusion of mesonephric duct (mullerian duct) during embryonic life results in a variety of congenital uterine malformations.[1] The incidence of uterine malformations in general population is estimated to be about 3-5% and 5-10% in women with poor reproductive outcome.[2-4] Precise diagnosis requires diagnostic modalities like ultrasonography (USG), magnetic resonance imaging hysterosalpingogram, hysteroscopy and laparoscopy. Pregnancies occurring in the malformed uterus are relatively rare, and many of them are asymptomatic, but should be suspected in patients with recurrent miscarriages and malpresentaions. Airoldi *et al.* reported that high-risk obstetric intervention did not significantly increase the fetal survival rate for uncorrected uterine anomalies.[5] Reproductive outcomes can be improved with early diagnosis and close follow-up with better treatment.

Access this article online

www.ijss-sn.com

Month of Submission : 02-2015
Month of Peer Review : 03-2015
Month of Acceptance : 03-2015
Month of Publishing : 04-2015

CASE REPORT

A 33-year-old lady $G_3P_2L_2$ with 20 weeks gestation came for her first antenatal checkup. Her first delivery was a normal vaginal delivery at term with growth restricted female baby weighing 2 kg and is now alive and healthy. Second was a caesarean section for breech, oligohydramnios, intrauterine growth restriction (IUGR). She delivered a female child weighing 1.75 kg, alive and healthy. Third is present pregnancy. Targeted imaging for fetal anomalies was done at 20 weeks, which showed a SLF of 20 w 6 d gestational age with no fetal structural abnormality. USG was repeated at 30 weeks as the height of uterus was less than a period of gestation and uterus appeared deviated to the right. USG showed a SLF of 30 w 2 d gestation in bicornuate uterus in breech presentation with AFI 7 and EF 1200 g. Doppler's study revealed head sparing wave form in fetal middle cerebral artery, high resistance flow pattern and mid diastolic notching in left uterine artery. Doppler wave form in right uterine artery normal, utero placental insufficiency. USG repeated 2 weeks later in view of absent fetal heart which showed intrauterine fetal demise with Spalding sign. Patient went into spontaneous labor 2 days later. Before going into active labor she developed vaginal bleeding. Screening USG showed abruptio placenta with retroplacental clots and repeat emergency lower

Corresponding Author: Dr. Aruna Subha Shree Rao Yellayi, Plot no. 113, Sector 12, MVP Colony, Visakhapatnam - 530 017, Andhra Pradesh, India. Phone: +91-9866655515. E-mail: arunay67@hotmail.com

segment caesarean section was done. Operative findings were - Bicornuate uterus with fetal head in the right horn and breech in the lower uterine segment toward the left side. Left horn empty. Figure 1 and 2 show the dominant right horn seen during caesarean section.

Delivered a dead macerated baby as breech. Placenta was posterior and on the septum which was separated with a rectoplacental clot of about 100 g. Both tubes and ovaries were normal. Patient was stable post-operatively and was discharged on 6th post-operative day with an advice to go for total abdominal USG to rule out any renal abnormalities.

DISCUSSION

The mullerian ducts originate from the coelomic epithelium at 5 weeks of embryonic age and fuse with the uro-genitial sinus at 8 weeks. Abnormalities in the formation and fusion of mullerian ducts can result in a variety of abnormalities of uterus and vagina. Failure of development of mullerian duct is associated with failure of development of uretric bud from the caudal end of the Wolfian duct. Thus, an entire kidney can be absent on the side ipsilateral to the agenesis of a mullerian duct.[6] An effort to determine a genetic relationship in the development of disorders of the mullerian ducts has shown a polygenic or multifactorial inheritance. Rock and Breech have suggested a modification of American Fertility Society classification of uterovaginal anomalies that comprises four groups based on embryological considerations.[6] Our case fits into Class III B. Though Golan *et al.* have emphasized on the need for cervical encirclage in patients with uterine anomalies, in present case it could not be done as the diagnosis of bicornuate uterus was done at 30 weeks gestation and also the cervical length USG was normal and there was no funneling.[7] Ravasia *et al.* described the incidence of uterine rupture in a cohort of woman with mullerian duct anomalies who attempted vaginal birth after caesarean delivery (VBAC).[8] They concluded that vaginal delivery is common among women with mullerian duct anomalies who attempt VBAC but the rates of uterine rupture and other complications are high (8% compared to 0.61% without mullerian duct anomalies). The authors proposed several mechanisms for the greater incidence of uterine rupture in this population: abnormal development of lower uterine segment, previous scar similar to a vertical or classical incision and the possibility of abnormal traction on the uterine scar during labour. Our patient was given a short trail of labor in view of her first normal delivery. Petrozza *et al.* attempted to determine inheritance pattern in patients with uterine anomalies and concluded that the inheritance is most likely a polygenic mechanism and not inherited commonly in a dominant fashion.[9] The most likely cause of IUGR and intrauterine fetal death in the instant case could be due to implantation of the placenta in the myometrium of the partial bicornuate uterus where only the upper portion of the uterus dips into the chamber.

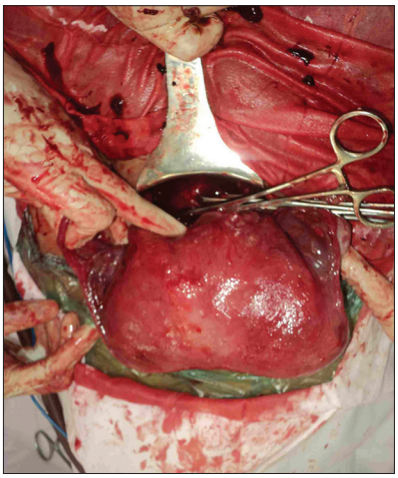

Figure 1: Bicornuate uterus anterior view after delivery of the baby. Ring forceps on the myometrium between the two horns

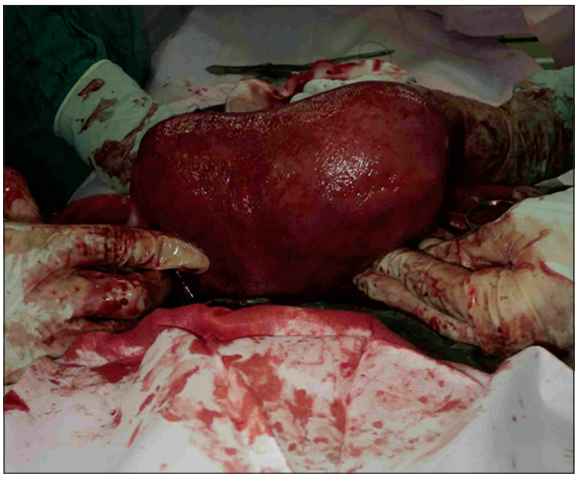

Figure 2: Bicornuate uterus posterior view after the delivery of the baby

CONCLUSION

Congenital uterine malformations are relatively common and often asymptomatic. Clinicians must suspect uterine malformations in cases with recurrent miscarriages and adverse obstetric outcomes and should utilize the opportunity to inspect the uterus in the cesarean section in such cases. Urinary tract imaging should be performed because of frequent associated anomalies. A bicornuate uterus does not always lead to complications and may carry a pregnancy to term. It is necessary to establish a prenatal diagnosis to ensure proper care and prevent complications.

REFERENCES

1. The American Fertility Society classifications of adnexal adhesions, distal tubal occlusion, tubal occlusion secondary to tubal ligation, tubal pregnancies, müllerian anomalies and intrauterine adhesions. Fertil Steril 1988;49:944-55.
2. Raga F, Bauset C, Remohi J, Bonilla-Musoles F, Simón C, Pellicer A. Reproductive impact of congenital Müllerian anomalies. Hum Reprod 1997;12:2277-81.
3. Acién P. Incidence of Müllerian defects in fertile and infertile women. Hum Reprod 1997;12:1372-6.
4. Acién P. Reproductive performance of women with uterine malformations. Hum Reprod 1993;8:122-6.
5. Airoldi J, Berghella V, Sehdev H, Ludmir J. Transvaginal ultrasonography of the cervix to predict preterm birth in women with uterine anomalies. Obstet Gynecol 2005;106:553-6.
6. Rock JA, Breech LL. Surgery for anomalies of mullerian ducts. In: Rock JA, Jones HW III, editors. Telinde's Operative Gynaecology. 10th ed. Philadelphia: Lippincott Williams and Wilkins; 2011.
7. Golan A, Langer R, Wexler S, Segev E, Niv D, David MP. Cervical cerclage – Its role in the pregnant anomalous uterus. Int J Fertil 1990;35:164-70.
8. Ravasia DJ, Brain PH, Pollard JK. Incidence of uterine rupture among women with müllerian duct anomalies who attempt vaginal birth after cesarean delivery. Am J Obstet Gynecol 1999;181:877-81.
9. Petrozza JC, Gray MR, Davis AJ, Reindollar RH. Congenital absence of the uterus and vagina is not commonly transmitted as a dominant genetic trait: Outcomes of surrogate pregnancies. Fertil Steril 1997;67:387-9.

How to cite this article: Aruna S, Yellayi AS, Rani GS. Bicornuate Uterus with Pregnancy: A Case Report and Review of Literature. Int J Sci Stud 2015;3(1):231-233.

Source of Support: Nil, **Conflict of Interest:** None declared.