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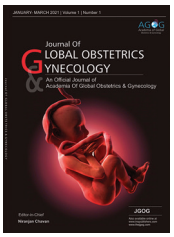
Case Report



Bicornuate Uterus: An Interesting Case Report of a Successful Pregnancy Outcome in a Rare Mullerian Anomaly

Deepika Ravi*, Niranjan N. Chavan, Deepali Kapote, Swara Patel, Madhura Mandlik, Rutuja Mohite

Department of Obstetrics and Gynecology, Lokmanya Tilak Municipal Medical College and General Hospital, Mumbai, Maharashtra, India

ABSTRACT

Müllerian duct anomaly is a rare condition. Many cases remain unidentified, especially if asymptomatic. Thus, it is difficult to determine the actual incidence. Müllerian duct anomaly is associated with a wide range of gynecological and obstetric complications such as miscarriage, ectopic pregnancy, pre-term labor, malpresentation, and placental abruption. This case report discusses a case of pregnancy with a bicornuate uterus. A 23-year-old, gravida 3 abortion 2 with a known bicornuate uterus came for antenatal care registration at our tertiary care hospital. The patient presented at 14 weeks 4 days gestation with threatened abortion presentation. The patient had a successful McDonald's Cervical Cerclage done. At 37 weeks 6 days of gestation patient was electively admitted for safe confinement and the McDonald stitch was removed. The patient was taken up for emergency lower segment C-section in view of the failure of induction. Intraoperatively, evidence of a bicornuate uterus was seen. The intraoperative and post-operative period was uneventful, a female baby of 2118 g was delivered with an APGAR of 9/10.

Key words: Cerclage, C-section, Mullerian, Pregnancy

INTRODUCTION

Anomaly in the Müllerian duct is a rare state. Many cases remain unknown, especially if asymptomatic. Thus, it is hard to govern the actual occurrence. Müllerian duct anomaly is linked with an extensive range of gynecological and obstetric problems, such as miscarriage, ectopic pregnancy, pre-term labor, malpresentation, and placental abruption.[1]

The incidence of Mullerian anomalies in the general population is estimated to be around 3–7%,[2] while in women with recurrent pregnancy loss or infertility, it is higher, ranging from 10% to 25%.

The incidence of bicornuate uterus is estimated to be 0.1–0.6%.[3]

The American Society for Reproductive Medicine Müllerian Anomalies Classification system, which was updated in 2021, classifies the series of anomalies by descriptive terms, such as Müllerian agenesis, cervical agenesis, unicornuate uterus, uterus didelphys, bicornuate uterus, septate uterus, longitudinal vaginal septum, transverse vaginal septum, and complex anomalies [Figure 1].[4]

Correspondent Author:
Deepika Ravi, Junior Resident, Department of Obstetrics and Gynaecology, LTMMC and GH, Sion, Mumbai, Maharashtra, India.
E-mail: deepika.ravi2805@gmail.com

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CASE REPORT

A 23-year-old, gravida 3 abortion 2 with a known bicornuate uterus came for antenatal registration in our tertiary care hospital at 7 weeks of gestation. All routine antenatal investigations were within normal limits. Her viability scan performed revealed a uterus with two widely spaced uterine cornua and a single cervix with a single live intrauterine gestational sac within the left cornua with crown-rump length of 5.4 mm corresponding to gestation 6 weeks 2 days with cardiac activity of 115 bpm. The endometrium of the right cornua measures 11.2 mm. The patient was started on oral and depot progesterone and Tab. Aspirin 150 mg od in view of previous pregnancy losses.

The patient presented at 14 weeks 4 days gestation with pain abdomen and per vaginal spotting for 2 days. On per abdominal examination, the abdomen was soft, with no guarding, tenderness, or rigidity.

On per vaginal examination, cervical os was 1.5 cm dilated with membranes felt. The patient was admitted and planned for cervical cerclage for improving her perinatal outcome.

All necessary pre-operative investigations were done and anesthetic fitness was taken. The patient had a successful McDonald's Cervical Cerclage done.

A post-operative viability scan revealed a single live intrauterine gestation corresponding to 15 weeks 3 days. A urine routine, urine culture and sensitivity, and high vaginal swab all revealed no

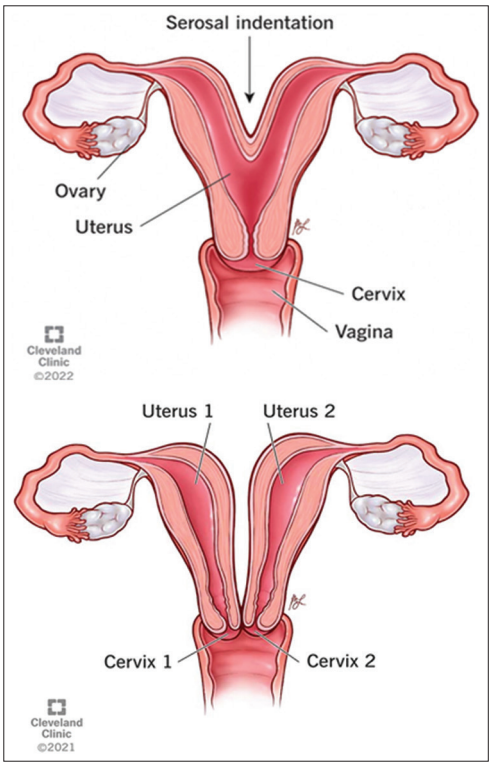

Figure 1: Bicornuate uterus versus didelphys uterus

growth of pathogenic organisms. The patient was discharged after 1 week of observation. Anomaly scan was done at 19 weeks 4 days and was within normal limits. At 37 weeks 6 days of gestation, the patient came to the outpatient department for a routine check-up. The patient was electively admitted for safe confinement.

On examination patient's general condition was fair and afebrile. The patient was vitally stable.

On per abdominal examination uterus was full term, cephalic longitudinal lie, fetal heart rate (FHS) + 140/min, relaxed.

On per speculum examination, a cervical stitch was seen and removed. On per vaginal examination, os admits tip of the finger, the cervix is uneffaced, mid posterior and soft no leak, and no show.

The patient was admitted for induction of labor. All routine investigations were sent and were within normal limits. Moreover, the patient was induced mechanically with Foley's catheter after proper informed and valid consent from the patient and her relatives.

The patient was monitored for spontaneous progress of labor with continuous FHS monitoring but did not progress adequately.

The patient was hence taken up for emergency lower segment cesarean section under spinal anesthesia in view of the failure of induction.

Intraoperative findings – Uterus had two widely spaced cornua with pregnancy in the left cornua [Figure 2].

Kerr's incision was taken on the lower uterine segment and the baby was delivered by vertex presentation.

The patient delivered a healthy female baby of 2118 g who cried immediately on birth and was shifted to the mother's side.

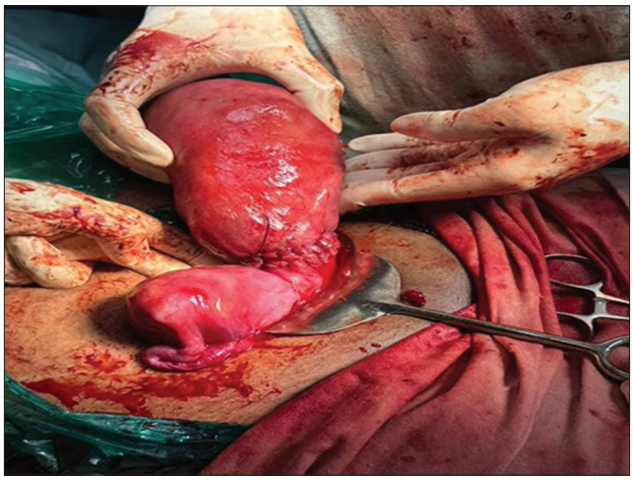

Figure 2: Intraoperative evidence of right and left cornua of bicornuate uterus

The uterus was closed in two layers. Hemostasis was accomplished at a blood pressure of 110/80 mmHg [Figure 3]. The abdomen was closed in layers. Both the cesarean section and the puerperium were uneventful.

DISCUSSION

Müllerian anomalies, also known as Müllerian duct anomalies, are congenital malformations of the female reproductive tract that arise due to incomplete development, fusion, or resorption of the Müllerian ducts during embryogenesis. These anomalies can significantly impact reproductive outcomes, including fertility, pregnancy complications, and perinatal outcomes.[5,6]

ESHRE/ESGE classification
Female genital tract anomalies

	Uterine anomaly		Cervical / Vaginal anomaly	
	Main class	*Sub-class*	*Co-existent class*	
U0	Normal uterus		C0	*Normal cervix*
U1	Dysmorphic uterus	a. T-shaped b. Infantilis c. Others	C1	*Septate cervix*
U2	Septate uterus	a. Partial b. Complete	C2	*Double "normal" cervix*
U3	Bicorporeal uterus	a. Partial b. Complete c. Bicorporeal septate	C3	*Unilateral cervical aplasia*
			C4	*Cervical Aplasia*
			V0	*Normal vagina*
U4	Hemi-uterus	a. With rudimentary cavity (communicating or not horn) b. Without rudimentary cavity (horn without cavity / no horn)	V1	*Longitudinal non-obstructing vaginal septum*
			V2	*Longitudinal obstructing vaginal septum*
U5	Aplastic	a. With rudimentary cavity (bi- or unilateral horn) b. Without rudimentary cavity (bi- or unilateral uterine remnants / Aplasia)	V3	*Transverse vaginal septum and/or imperforate hymen*
			V4	*Vaginal aplasia*
U6	Unclassified Malformations			
U			*C*	*V*

Even though pregnancy for women with Mullerian anomalies was not a complete indication for cesarean section, they could result in increased occurrence of dystocia and a predominantly elevated prevalence of fetal position irregularity.[7] The arcuate uterus is rarely found with adverse outcomes.[8] Recurrent pregnancy losses, pre-term birth, and malpresentation are major problems with bicornuate anomaly.[9]

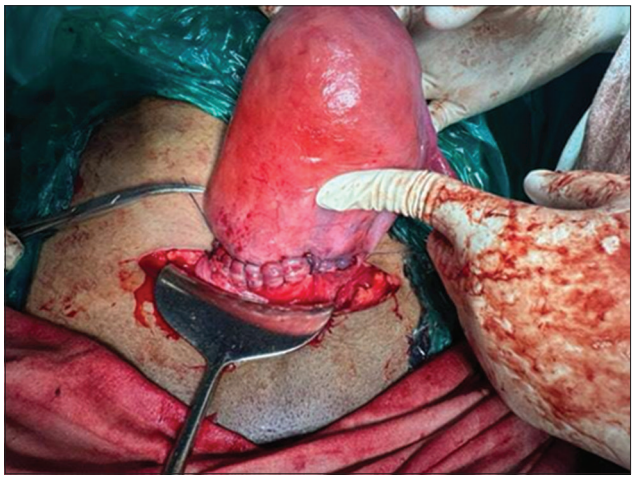

Figure 3: Hemostasis achieved

Second-trimester losses is one of the most common complications encountered in Mullerian Duct anomalies and frequent antenatal checkups along with early detection and management can improve perinatal outcomes. In this case, this problem was tackled with a cervical cerclage performed at the right time resulting in a successful pregnancy outcome. Cervical cerclage is an effective procedure in bicornuate uterus for the prevention of pre-term deliveries.[10]

Cervical cerclage is commonly of two types:

1. McDonald's
2. Shirodkar's.

In the former method, a suture is positioned around the cervix in a purse-string manner and firmly tied anteriorly. The McDonald approach needs no dissection into para-cervical tissues.

In the Shirodkar procedure, an anterior colpotomy is done laterally with dissection of the bladder up to the interior cervical os and a posterior colpotomy with dissection of the areola and peritoneum up to the internal os. The suture is done subcutaneously, and the knot is secured in the subsequent defect and concealed under the vaginal epithelium. A few alterations do not need a posterior colpotomy and place the knot exterior to the vaginal mucosal for ease of removal.

This technique is technically more difficult but allows more proximal placement of the stitch.

CONCLUSION

Müllerian anomalies significantly affect pregnancy outcomes, increasing the risk of miscarriage, pre-term labor, and fetal growth issues. Early diagnosis, surgical correction when applicable, and close monitoring during pregnancy can improve maternal and neonatal outcomes. At present, very few literature covers the outcomes of pregnancies in Mullerian duct anomalies and hence more research in this area will help better understand these conditions.

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