



EFFECT OF UTERINE ANOMALIES ON OBSTETRICAL OUTCOMES: A CLINICAL STUDY

Obstetrics & Gynaecology

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ABSTRACT

Objectives: To evaluate pregnancy outcomes in uterine anomalies. **Methods:** A retrospective study evaluating the obstetric outcomes of 20 patients with congenital uterine abnormalities was conducted in the Department of OBG, VIMS, Ballari from January 2021 to December 2021. **Results:** Among 20 cases with uterine anomalies, 8 (40%) cases had bicornuate uterus, 5 (25%) cases had arcuate uterus, 5 (25%) cases had septate uterus and 2 (10%) had unicornuate uterus. The obstetrical outcomes were 6 (30%) delivered preterm, 11 (55%) malpresentations were seen, 3 (15%) had ectopic and 3 (15%) had abortions. Infants born to mothers having congenital uterine anomalies were of lower birth weight. Therefore, it can be concluded the women with congenital uterine anomalies had a higher risk of malpresentation and preterm deliveries. They also had a higher incidence of small for gestational age neonates due to improper placentation. **Conclusions:** Women with congenital uterine anomalies have significantly higher rates of malpresentations, cesarean deliveries, preterm deliveries and abortions. Septate uterine anomaly is associated with more rates of abortions.

KEYWORDS

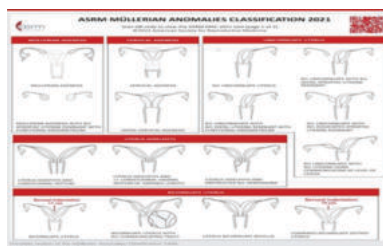
Congenital uterine anomalies, Malpresentation, Preterm birth, Small for gestational age babies.

INTRODUCTION

Abnormal formation, fusion or resorption of Mullerian ducts during fetal life leads to congenital uterine anomalies^[1]. Paramesonephric ducts (Mullerian) appears between 5-6 weeks, derived from intermediate mesoderm lateral to mesonephric (Wolffian) duct. It depends on absence of male determining hormone which is present on Y chromosome. Ambisexual period persists upto 8 weeks thereafter one of the ducts persists and other disappears. One of them disappears at 9 weeks, fusion of mullerians at 10 weeks and cavity formation at 20 weeks^[2]. There are irregularities in the incidence and prevalence rate because of non standardization of classification system, non uniform Diagnostic modalities and different study population^[3]. Normal/fertile women : 1.5 – 4.5%, infertile patients: 3-6% and women with recurrent miscarriage: 5-10%.

Classification Of Mullerian Anomalies

It was originally devised by Buttram and Gibbons in 1979 and modified by American Fertility Society in 1988^[4]. In current practice, European Society of Human Reproduction and Embryology (ESHRE) classification (2013) is used. ASRM introduced updated classification (2021).



Congenital uterine anomalies causes infertility, recurrent pregnancy loss. But its association with late trimester adverse effect is less studied. Relation between uterine anomalies and fetal malpresentation and preterm delivery has not been elucidated extensively. Therefore, through this study we aim to improve upon the existing data regarding the association of congenital uterine anomalies with adverse third trimester pregnancy outcomes^[5].

METHODOLOGY

It is a Retrospective study carried out from January 2021 to December 2021 at Vijayanagar Institute of Medical Sciences. All singleton pregnancy with uterine anomalies delivering at the hospital during the above-mentioned time period were included in the study. Maternal demographic data, Obstetric history, pregnancy complications (fetal

malpresentation), presence of associated maternal complications, present pregnancy outcomes (including preterm) were obtained from the parturition registry of the hospital. Fetal outcomes were measured using birth weight, IUGR, Fetal distress, presence of congenital anomalies and need for NICU admission.

RESULTS

During the study period from January 2021 to December 2021 A total of 20 pregnancies complicated by uterine anomalies were identified. Total number of deliveries during this time period was 8842, making women with congenital uterine anomalies 0.22% of the population.

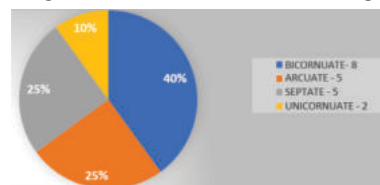


Figure 1: Congenital Uterine Anomalies In Study Group.(n=20)

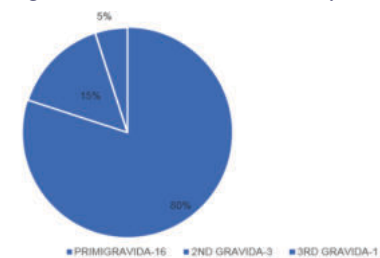
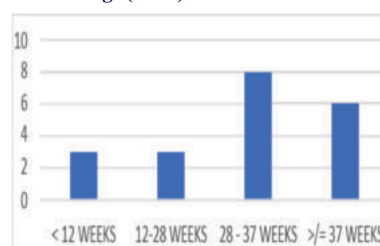


Figure 2: Gravida Wise Distribution Of Cases.(n=20)

Table 1- Gestational Age (n=20)



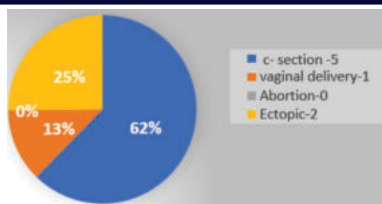


Figure 3: Outcomes In Bicornuate Uterus (n=8)

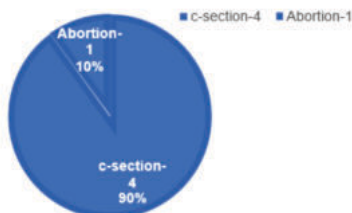


Figure 4: Outcomes In Arcuate Uterus (n=5)

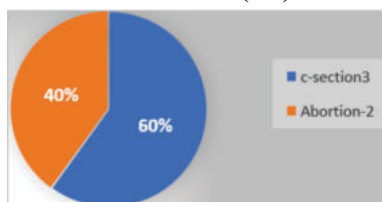


Figure 5: Outcomes In Septate Uterus (n=5)

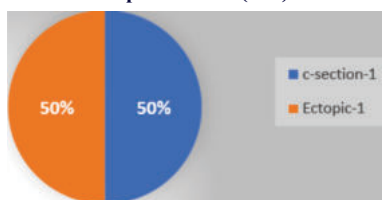


Figure 6: Outcomes In Unicornuate Uterus (n=2)

Table 2 - Fetal Presentation (n=14)

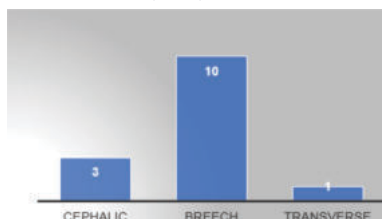


Table 3- Gestational Age At The Time Of Delivery (n=14)

Uterine anomalies	Preterm	Term
Bicornuate(6)	4	2
Arcuate(4)	-	4
Septate(3)	3	-
Unicornuate(1)	1	-
Total (14)	8	6

Table 4- Diagnosis Of Uterine Anomalies (n=17)

Uterine anomalies	Prenatal USG	Intra operative
Bicornuate(8)	1	7
Arcuate(4)	-	4
Septate(3)	-	3
Unicornuate(2)	-	2
Total (17)	1	16

Table 5- Associated With Other Abnormalities

Other anomalies	Number of patients
Longitudinal vaginal septum	1
Unilateral agenesis of kidney	1
Horseshoe kidney	1

Table 6- Perinatal Outcome (n=14)

Perinatal outcome	Number of cases	%
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Alive and healthy	6	42.8
NICU admission	8	57.1
Perinatal mortality	0	0



DISCUSSION

This retrospective study confirmed a strong association between uterine anomalies and its adverse outcomes. In present study, Out of 5 women with arcuate uterus, 4 women carried their pregnancy to term, 1 presented as breech and 1 as transverse lie and one had abortion. Out of all the anomalies arcuate uterus seemed to have the most favourable outcome.

5 women had septal anomalies out of which 3 were classified as subseptate uterus and 2 were septate. Both the women with septate uterus had abortion. All three cases of subseptate had preterm deliveries with breech presentation being present in one of these women.

Bicornuate uterus was diagnosed in 8 women out of which 6 presented as breech. Out of 8 cases of bicornuate uterus, 2 pregnancy continued upto term with no associated fetal and maternal complications. 4 cases had preterm delivery. 2 cases had ectopic. 5 cases underwent cesarean section and 1 case delivered vaginally. The women presenting with Unicornuate uterus had 1 preterm delivery, 1 had ectopic pregnancy. The Limitation of this study would be the small sample size, short duration of study and absence of a control group to compare the results.

CONCLUSION

Congenital uterine anomalies are common, but their obstetrical outcome remains unclear. While many studies have examined the impact of uterine anomalies on fertility, there is limited research on their effect on pregnancy. Our present study reveals that women with congenital uterine anomalies have a higher incidence of preterm deliveries, malpresentation, low birth weight, and small-for-gestational-age babies compared to the general population. Therefore, it can be concluded that congenital uterine anomalies pose a risk factor for preterm births, low birth weight, and malpresentations. This finding suggests the importance of screening for uterine anomalies in women who have experienced recurrent pregnancy losses, previous small-for-gestational-age babies, or malpresentation in a prior pregnancy. Furthermore, the adverse effects of congenital uterine anomalies on obstetrical outcomes underscore the need for a larger case-control study to validate these findings in the general population. Consequently, considering universal prenatal screening for uterine anomalies may be warranted to improve obstetrical outcomes in patients with such anomalies.

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