



“INCIDENCE OF VARIOUS FOETAL PRESENTATIONS,MODE OF DELIVERY AND PERINATAL OUTCOME IN UTERINE ANOMALIES”

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ABSTRACT

Background: Congenital uterine anomalies carry significant obstetrical risks including various malpresentations,fetal growth restriction ,preterm delivery,preterm premature rupture of membranes,fetal demise.Sometimes may present with dreaded complications like ruptured uterus,torsion of uterus,obstructed labour,postpartum hemorrhage and retained placenta. Although it has been established that congenital uterine anomalies lead to infertility and recurrent first trimester pregnancy loss,this study is done to know the incidence of malpresentations,pregnancy outcome and perinatal outcome in 3rd trimester.

Objective: To establish relationship between uterine anomalies and pregnancy outcome in 3rd trimester.To estimate the incidence of malpresentations ,mode of delivery,perinatal outcome.

Materials and Methods : Hospital based prospective observational study conducted in government maternity hospital,tirupathi over a period of 12 months.

We included pregnant women with uterine anomalies attending government maternity hospital OPD with >28 weeks GA and incidentally detected uterine anomalies during cesarean section or by exploration of uterus for retained placenta.

Results: Out of 9412 admissions at GMH,Tirupathi during the study period,uterine anomalies were detected with the prevalence of 1.4%.septate uterus (40%) is the most common anomaly found.Most cases were seen between between 25 -35 years.Most common presentation observed is breech(56%).Perinatal morbidity(28%) and mortality(18%) is mostly due to association of uterine anomalies with preterm labour and IUGR babies.

Conclusion: Incidence of uterine anomalies is under reported as many were asymptomatic and can have normal obstetric outcome.adverse pregnancy outcomes include malpresentations,cesarean delivery ,preterm birth ,IUGR.

KEYWORDS : uterine anomalies,malpresentations,mode of delivery,perinatal outcome,3rd trimester.

INTRODUCTION:

Congenital uterine anomalies include a spectrum of abnormalities caused by abnormal embryologic fusion and canalization of mullerian ducts to form a normal uterine cavity¹.These anomalies are often asymptomatic and unrecognized.Estimated prevalence in general population is 4 to 7%.Most common classification system used is by the American fertility society of reproductive medicine⁸.

Class 1-uterine agenesis /uterine hypoplasia
Class 2-unicornuate uterus-unicornis unicolis
Class 3-uterus diadelphys
Class 4-bicornuate uterus,next common type
Class 5-septate uterus ,commonest anomaly
Class 6-arcuate uterus
Class 7-DES exposure , T shaped uterus.

The incidence of uterine anomalies diagnosed by a reliable test in an unselected population is 5.5%.However the incidence is significantly higher in women with history of miscarriages(13.3%) and miscarriage in association with infertility(24.5%)

Uterine anomalies carry significant obstetrical risks including various malpresentations,fetal growth restriction ,preterm delivery,preterm premature rupture of membranes,fetal demise.Sometimes may present with dreaded complications like ruptured uterus,torsion of uterus,obstructed labour,postpartum hemorrhage and retained placenta⁷.

Although it has been established that congenital uterine anomalies lead to infertility and recurrent first trimester pregnancy loss,this study is done to know the incidence of malpresentations,pregnancy outcome and perinatal outcome in 3rd trimester.

An aim to counsel the women whose pregnancies are complicated by uterine anomaly and to guide appropriate antenatal surveillance for better maternal and perinatal outcome.

AIMS AND OBJECTIVES:

To determine the incidence of various fetal presentations in uterine anomalies.

To study the mode of delivery in various uterine anomalies.
To study the perinatal outcome.

MATERIALS AND METHODS:

After ethical committee approval was obtained,a prospective observational study was conducted among pregnant women detected with uterine anomalies attending to government maternity hospital, tirupathi.

INCLUSION CRITERIA:

1. Pregnant women with uterine anomalies with >28weeks gestational age .
2. Women with incidentally detected uterine anomalies during cesarean section or by exploration of uterus for retained placenta.

EXCLUSION CRITERIA:

1. pregnancy with uterine anomaly with first and second trimester miscarriage
2. And those who are not able to follow up.

our assessment during antenatal period include history taking –any recurrent pregnancy losses ,clinical examination,abdominal and transvaginal ultrasound for detection of uterine anomalies.Some of the anomalies were diagnosed by outside centres prepregnancy.For all the patients with a diagnosis made outside,the medical records were reviewed.Obstetric examination detecting fetal presentation vertex,breech or other malpresentation.Mode of delivery whether spontaneous or induced vaginal delivery,operative vaginal delivery, emergency or elective cesarean section will be observed. Perinatal outcome is assessed by measuring the birth weight for fetal growth restriction and gestational age for preterm delivery.

RESULTS:

Total of 132 uterine anomalies were reported during the study period of which 100 cases were followed up for maternal and perinatal outcome.

Table No :1 Distribution Of Type Of Uterine Anomaly

TYPE OF UTERINE ANOMALY	FREQUENCY	PERCENT
Septate uterus	40	40
Arcuate uterus	23	23

Subseptate uterus	15	15
Bicornuate uterus	17	17
Unicornuate uterus	5	5
Total	100	100

Septate uterus is the most common anomaly found in our study(40%) followed by arcuate uterus(23%).

Table No :2 Time Of Uterine Anomaly Detection

TIME OF DETECTION	Type of uterine anomaly				
	Septate	Arcuate	subseptate	bicornuate	Unicornuate
Prepregnancy	12 (50%)	3(13.1%)	-	8(47%)	3(60%)
Antenatal	20 (30%)	2(8.6%)	3(20%)	7(41.1%)	2(40%)
intraoperative	8(20%)	18 (78.3%)	12(80%)	2(11.7%)	-
Total	40	23	15	17	5

Major of uterine anomalies like bicornuate and unicornuate uterus were detected prepregnancy during evaluation for recurrent pregnancy loss, bad obstetric history and during infertility work up.

Table No :3 Type Of Uterine Anomaly Versus Gestational Age At Which Delivery Happened

Gestational age	Type of uterine anomaly				
	Septate	Arcuate	subseptate	bicornuate	Unicornuate
Preterm	28 (70%)	13 (56.5%)	2(13.3%)	15(88.2%)	4(80%)
>37 weeks	12 (30%)	10 (43.4%)	13(86.6%)	2(11.7%)	1(20%)
Total	40	23	15	17	5

Bicornuate (88.2%) and unicornuate (80%) uterus due to reduced uterine cavity most commonly result in preterm deliveries.

Table No :4 Type Of Uterine Anomaly Versus Fetal Presentation

FOETAL PRESENTATION	Type of uterine anomaly				
	Septate	Arcuate	subseptate	bicornuate	Unicornuate
Mal presentation	28 (70%)	12 (52.1%)	7(46.6%)	11(64.7%)	4(80%)
Vertex	12 (30%)	11 (47.8%)	8(53.3%)	6(35.2%)	1(20%)
Total	40	23	15	17	5

Malpresentation is most common in unicornuate uterus(80%).

Table No:5 Type Of Uterine Anomaly Versus Mode Of Delivery

Mode of delivery	Type of uterine anomaly				
	Septate	Arcuate	subseptate	bicornuate	Unicornuate
LSCS	32 (80%)	7(30.4%)	8 (53.3%)	11 (64.8%)	5(100%)
OTHER MODE	8(20%)	16 (69.6%)	7(46.7%)	6(35.2%)	-
Total	40	23	15	17	5

Unicornuate uterus (100%),septate uterus (80%) were associated with more cesarean deliveries.

Table No:6 Type Of Uterine Anomaly Versus Fetal Growth

Fetal growth	Type of uterine anomaly				
	Septate	Arcuate	subseptate	bicornuate	Unicornuate
IUGR	6(15%)	3(13%)	4(26.6%)	7(41.1%)	3(60%)
Normal	34 (85%)	20(87%)	11(73.3%)	10(58.8%)	2(40%)
Total	40	23	15	17	5

Perinatal morbidity is seen in 28% of cases most commonly due to association of uterine anomalies with preterm labour and IUGR babies.

DISCUSSION:

Uterine anomalies are often asymptomatic and unrecognized, but have a reported prevalence of approximately 2-4% in reproductive aged women⁴ and upto 5 -25% in women with adverse outcomes. In this study prevalence is 1.4%. Low prevalence may be due to under diagnosis of minor uterine anomalies as ultrasound is the modality used for diagnosis.

Frequency of uterine anomalies-septate uterus(40%) followed by arcuate uterus(23%),bicornuate, subseptate, unicornuate uterus which is comparable with fox et al,2014 where septate uterus (31.6%) followed by bicornuate,unicornuate,arcuate uterus.

Fetal presentations-malpresentations are more common in uterine anomalies. Most common fetal presentation in this study is breech (56%) and is mostly seen in unicornuate uterus(80%). The incidence of malpresentations in this study is slightly higher compared to Zhang Y et al⁵ and Fox et al¹¹.

Mode of delivery-the most common mode of delivery in this study is through cesarean section (66%) is slightly lower when compared to other studies like Zhang et al.

Preterm deliveries(62%) are most commonly associated due to reduced uterine cavity which is in accordance with Zhang et al and fox et al.

IUGR is found more with unicornuate uterus(60%),bicornuate uterus(41.1%). Disturbance in the uterine blood flow and decreased muscle mass may be the cause behind growth restriction related to uterine anomalies.

Perinatal mortality –mullerian anomalies do not appear to carry an independently increased risk of perinatal mortality. Preterm and lowbirth weight mediate the association between anomalies and perinatal mortality.

CONCLUSION :

It is important to recognize the wide variation in degree of uterine anomalies and the unique impact of each uterine anomaly on female reproductive success. Awareness, high index of suspicion for uterine anomalies in the reproductive age group and early interventions help to prevent dreaded complications and improve obstetric outcome in these women. The clinician should keep in mind the embryologic origins of congenital uterine anomalies, combined with appropriate application of modern imaging techniques, can lead to the diagnosis of other associated anomalies.

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