CASE REPORT

A CASE REPORT OF SUCCESSFUL PREGNANCY OUTCOME IN UNICORNUATE UTERUS WITH RUDIMENTARY HORN

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ABSTRACT: Unicornuate uterus with rudimentary horn is developmental anomaly which occurs due to abnormal or failed development of one of the paired mullerian duct or fusion of the ducts. Rudimentary horn can be communicating or non-communicating. Non communicating rudimentary horn (90%) is more common type. Women with unicornuate uterus have increased incidence of obstetric complications like spontaneous abortions, preterm delivery and intrauterine foetal demise and Gynaecological complications like infertility, endometriosis and dysmenorrhoea. We here present a case of 25yrs, G2P1D1 on admission 32 weeks 3days by LMP and 31weeks 0 days by USG of 7weeks with Rh negative pregnancy with HBsAg reactive status with severe oligohydramnios (AFI-5cm) with symmetric IUGR admitted for observation. Emergency LSCS was done on day 15 of admission i/v/o colour Doppler s/o placental insufficiency and intraoperatively patient was found to have unicornuate uterus with rudimentary horn and baby was male 1.4kg cried immediately after birth. **CONCLUSION:** If pregnancy with unicornuate uterus with rudimentary horn managed well it can result in favourable obstetric outcome.

KEYWORDS: Unicornuate uterus with rudimentary horn, IUGR, OLIGOHYDRAMNIOS, RH Negative.

INTRODUCTION: Unicornuate uterus with rudimentary horn is developmental anomaly which occurs due to abnormal or failed development of one of the paired mullerian duct. Women with unicornuate uterus have increased incidence of obstetric complications like spontaneous abortions, preterm delivery and intrauterine foetal demise and Gynaecological complications like infertility, endometriosis and dysmenorrhoea.

TYPES OF UNICORNUATE UTERUS:

A. With rudimentary horn;

- a. With Endometrial cavity,
  - i. Communicating,
  - ii. Noncommunicating,
- b. Without Endometrial cavity,

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B. Without rudimentary horn,

Figure 1

Amongst all types Unicornuate Uterus with Non-communicating rudimentary horn is most common type.

Here we present a case with unicornuate uterus with Non-communicating rudimentary horn which resulted in good pregnancy outcome.

CASE: 25 yrs, Gravida 2 Para 1 Death 1(G2P1D1) comes to casualty as referred patient with complains of pain in abdomen since 1 day. Patient was 32.3 weeks by LMP and 31 weeks by USG of 7 weeks. Patient was with Rh negative status and recent USG of 27.2 weeks was suggestive of IUGR with severe oligohydramnios (AFI 5 cm) with Breech presentation. Patient was having facial puffiness and B/L pedal oedema. On examination-Uterus was 28 weeks size, Uterus was Relaxed and FHS were present 146/min and regular. On admission colour Doppler was suggestive of early diastolic notch in B/L uterine artery and S/D ratio of umbilical artery was 3.8. Patients was given Betamethasone 12mg IM 2 Doses 24 hrs apart first dose on admission and was put on Alamine infusion every alternate day with 5% Dextrose and L-Arginine sachet QID with foetal assessment by NST twice daily, DFKC and USG Colour Doppler once weekly. Doppler repeated after 1 week was suggestive of B/L uterine artery early diastolic notch and SD ratio of umbilical artery was 2.9 and her AFI increased to 6cm. Repeat Doppler on second week on Day 15 of admission was suggestive of uteroplacental insufficiency (Increased RI of umbilical artery) and absent uterine artery flow.

Hence termination of pregnancy was decided by LSCS. During LSCS incidentally patient was found to have Unicornuate uterus with rudimentary horn with single cervix and no other anatomical abnormality found. Male baby of 1.4 kg delivered. Baby cried immediately after birth and was admitted in Neonatal ICU in view of Low Birth Weight baby. Blood group of baby was O positive hence Anti D was given to patient. Patient was stable after LSCS and Foley's catheter was removed on Day 2 and discharged on Day 15 of LSCS with baby weight of 1.85 kg. HSG was done after 6 weeks of LSCS and the rudimentary horn was found to be of non-communicating type. After 4 month of LSCS, laparotomy was done and rudimentary horn was removed to avoid further complications as mentioned in discussion.

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DISCUSSION: EMBRYOLOGY: At six weeks of fetal life both males and females genital tracts have paired paramesonephric (Mullerian) duct and mesonephric (Wolffian) ducts. In females the mesonephric ducts degenerate and by twelve weeks due to lack of testosterone and the paired paramesonephric developed on lateral aspect of mesonephrons to reach urogenital sinus at nine weeks and unfused lateral arms of paramesonephric ducts forming fallopian tubes.

Figure 2

Paired sinovaginal bulb on posterior aspect of urogenital sinus fuse with lower end of mullerian duct to form vaginal plate. Mullerian ducts undergo internal canalization which results in two lumen divided by midline septum. Reabsorption of septum occurs in caudal to cranial direction. The two mullerian ducts fuse to form single uterine body. (2,3)

American Fertility Society Classification of Müllerian Anomalies	
I. Segmental müllerian hypoplasia or agenesis	
a.	Vaginal
b.	Cervical
c.	Uterine fundus
d.	Tubal
e.	Combined anomalies
II. Unicornuate uterus	
a.	Communicating rudimentary horn
b.	Noncommunicating horn
c.	No endometrial cavity
d.	No rudimentary horn
III. Uterine didelphys	
IV. Bicornuate uterus	
a.	Complete—division to internal os
b.	Partial
V. Septate uterus	
a.	Complete—septum to internal os
b.	Partial
VI. Arcuate	
VII. Diethylstilbestrol related	

Table 1

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Figure 3

In majority of the cases the presence of an upper genital tract anomaly escapes attention. In some, the detection is made accidentally during investigation of infertility or repeated pregnancy losses, diagnostic D & E procedures, manual removal of placenta or during caesarean section.

Unicornuate uterus carries the poorest foetal survival rate (40%) of all uterine anomalies. The abnormal shape, the insufficient muscular mass of uterus, the reduced uterine volume and inability to expand can be the result of poor obstetric outcome.

Patients with communicating and Non-communicating cavitory rudimentary horns are at increased risk for developing endometriosis, hematometra and hematosalpinx, adenomyosis, and ectopic pregnancies in the rudimentary horn with subsequent rupture of that horn. Endometriosis and adenomyosis tend to occur ipsilateral to the rudimentary horns, and their increased incidence is presumably due to retrograde flow of menses through the rudimentary horn as well as metaplastic conversion of the omnipotential mesothelium into the functional endometrium.^(6,7,8,9)

Rudimentary horn pregnancies as well as ectopic tubal and cornual pregnancies can occur in both communicating and non-communicating horns. In his review of 588 rudimentary horn pregnancies, Nahum⁽¹⁰⁾ found that 83% occurred in a non-communicating horn and that uterine rupture occurred in 90% of the cases in the second trimester. These types of pregnancies are thought to result from transperitoneal migration of sperm to the rudimentary horn and almost always have devastating consequences such as uterine rupture and life-threatening bleeding.^(6,10) Once this diagnosis is made, the rudimentary horn as well as the ipsilateral tube should be removed to avoid subsequent ectopic pregnancies.

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Pregnancy Outcomes in Women with a Unicornuate Uterus					
Outcome	Heinonen 1983	Moutos 1992	Acien 1993	Fedele 1995	Total
Patients	15	20	24	26	85
Pregnancies	35	36 ^a	55	57	183
Spontaneous abortions (%) ^b	4 (11)	13 (36)	12 (22)	33 (58)	62 (34)
Ectopic pregnancies (%) ^b	4 (11)	1 (2.8)	1 (1.8)	3 (5.2) ^c	9 (5)
Deliveries (%) ^b	27 (77)	22 (61)	42 (76)	21 (37)	112 (61)
Breech presentations ^d	9 (33)	—	13 (31)	—	
Cesarean deliveries ^d	8 (30)	8 (36)	—	—	
Preterm deliveries ^d	4 (15)	3 (14)	9 (21)	5 (24)	21 (19)
Term deliveries ^d	23 (85)	19 (86)	33 (79)	16 (76)	91 (81)
Fetal survival (%) ^b	25 (71)	21 (58)	39 (71)	20 (35)	105 (57)

Table 2

^a Excludes four elective abortions.

^b Of all pregnancies.

^c Includes one blind-horn pregnancy.

^d Excludes abortions and ectopic pregnancies.⁽¹¹⁾

INTRA OPERATIVE IMAGES:

Figure 4

Figure 5

Figure 6

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CONCLUSION: Pregnancy with unicornuate uterus with rudimentary horn if conserved well can result in good outcome.

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