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A case series on incidental per operative finding of uterine mullerian anomaly in a tertiary care hospital in tribal population

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Abstract: Mullerian duct anomalies arises when there is defect in development or fusion of Mullerian duct.[1] These anomalies may result into various obstetric complications like recurrent abortions, ectopic pregnancy, preterm labour, premature rupture of membranes, IUGR, malpresentations, antepatum as well as postpartum haemorrhage.[2] Management can be planned of these anomalies are diagnosed before operation but usually these are incidental findings during cesarean operation or laparotomy or laparoscopic procedures.[1] We are presenting eight such obstetric cases.

Keywords: Mullerian anomaly, uterine anomalies, unicornuate uterus, bicornuate uterus, incidental.

Introduction: Female reproductive organs which include fallopian tubes, uterus, cervix and the upper 2/3rds of vagina develop from two Mullerian ducts. Mullerian ducts fuse in between to form single cannal of uterus, cervix and upper vagina. Rest of the vagina develop from urogenital sinus.[3] Defect in formation, migration or fusion of Mullerian ducts may lead to various structural anomalies which include uterine hypoplasia or agenesis, unicornuate uterus with or without rudimentary horn, uterus didelphys, bicornuate uterus, septate uterus (partial or complete).[4] Cause of these anomalies are multifactorial some of these are infection mainly viral, radiation exposure, genetic mutations or drug induced.[1] These anomalies are generally detected incidentally during any operative procedure. Mullerian anomalies may lead to various obstetric complications like recurrent abortions, ectopic pregnancy, preterm labour, malpresentations,

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intrauterine growth restriction, antepartum and postpartum haemorrhage. We are presenting a case series of eight such mullerian anomalies presenting incidentally during operative procedure in tribal population of central India.

Case series: In our tertiary care hospital in last 6 months period out of total 2674 deliveries 1481 underwent cesarean section and out of these, 6 Mullerian anomalies were incidentally detected during cesarean section, one during laparotomy for ruptured ectopic pregnancy and one during abdominal tubal ligation operation. All these mullerian anomalies were seen in our tertiary care hospital in a span of 6 months. The mean age of patients was 26.6 years. According to American Fertility Society 2021, four of these anomalies were unicornuate uterus with atrophic uterine segment, one was unicornuate uterus without any atrophic segment, one was uterus didelphys without any longitudinal vaginal septum and two were bicornuate uterus with single cervix. Two patients with unicornuate uterus presented with breech, one unicornuate uterus patient presented with prelabour rupture of membranes (PROM), one with severe preeclampsia and severe IUGR, another one unicornuate uterus patient presented with left cornual ruptured ectopic with distal atrophic uterine remnant on right side, one bicornuate uterus had previous 2 cesarean sections and in this presented with placenta percreta which was managed by hysterectomy after delivering the baby with placenta insitu. The other horn was embedded inside so left undisturbed but tubal ligation was done at that side with full consent. One of the didelphys uterus presented with previous cesarean section with obstructed labor with impending rupture. On careful examination the bladder adhesions and previous cesarean scar was present on the other horn. The last case of bicornuate uterus came for open tubal ligation operation. We have taken consent from each patient for taking pictures for research purpose and displaying them in journal without disclosing their identity.

What this case series adds:

Literatures generally mention one case of unique mullerian anomaly but we have noticed several mullerian anomaly in our setup with different complications and different outcome.

S.No.	Age	Diagnosis	Booked or emergency case	significant history	Finding on clinical examination	Indication of operation	Per operative findings	Fetal outcome	Fetal anomaly
1	22	Primigravida with 38 weeks pregnancy with breech in labour	Emergency	One USG available at 29 weeks which also shown breech presentation	Frank breech with only buttocks palpable	Primigravida with breech in labour	Right Unicornuate uterus with left associated atrophic uterine remnant (Figure 1)	Healthy	No
2	35	G4P0L0A3 with 35 weeks pregnancy with PROM in labour	Emergency	Previous 1 first trimester spontaneous abortion and 2 second trimester spontaneous abortion	Cephalic with drained out liquor with fetal distress	Drained out liquor with Fetal distress	Left Unicornuate uterus with right associated atrophic uterine remnant (Figure 2)	Admitted in SNCU	No
3	28	G2P1L1 with 40 weeks pregnancy with footling breech presentation	Emergency	Nothing significant	Footling breech presentation	Footling breech	Left Unicornuate uterus with right associated atrophic uterine remnant (Figure 3)	Admitted in SNCU for observation	No
4	24	Primigravida with 36 weeks pregnancy with with severe preeclampsia with severe	Emergency	Preeclampsia diagnosed at 36 weeks only because of no ANC visits	Clinical features of ascites with pedal edema	Severe preeclampsia with severe IUGR	Unicornuate uterus with PPH controlled on medical management (Figure 4)	Admitted in SNCU	No

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		IUGR							
5	26	G3P1L1A1 with 39 weeks gestation with prev cesarean section with obstrcted labour	Emergency	Patient gave history of full cervical dilatation in PHC since last 8 hours with application of fundal pressure by some dai also	Patient was pale, tachycardiac, hypotensive,dehydrated with Bandl's ring, on per vaginal examination head was the presenting part with absent membranes with large caput with drained out liquor	Obstructed labour	Uterus didelphys without longitudinal vaginal septum with previous cesarean section likely in other horn and obstructed fetus on the other horn. Fetus was jam packed with uterus hugging the baby. Incision was extended to deliver the baby (Figure 5)	Fetus was not alive	No
6	23	Primigravida with 6 weeks pregnancy with ruptured ectopic	Emergency	Severe pain abdomen and lethargy since last 6-8 hours with slight bleeding per vaginum	Pale, Tachycardia, hypotensive, Abdomen was distended with guarding and rigidity On per vaginum examination cervical motion tenderness with slight bleeding	Ruptured ectopic pregnancy	Ruptured left cornual ectopic in right unicornuate uterus with right associated distal atrophic uterine remnant (Figure 6)	-	-
7	28	G3 P2 L0 with previous 2 cesarean section with 32 weeks pregnancy with scar tenderness with guarding	Emergency	History of previous 2 neonatal deaths due to pneumonia, USG of patient shows anterior placenta but upper segment	Tachycardia with uterine tenderness. On per vaginum examination the os was closed	Scar tenderness with guarding	Bicornuate uterus with anterior placenta percreta with hemoperitonium. Baby was delivered by incision away from placenta and hysterectomy was done with placenta in situ. The other cornua was left undisturbed as it was embedded inside but tubal ligation was done (Figure 7)	Admitted in SNCU on ventilatory support	No
8	27	P3 L3 came for tubal ligation	Elective	History of all uneventful vaginal deliveries	Not significant	For tubal ligation	Bicornuate uterus (Figure 8)	-	-

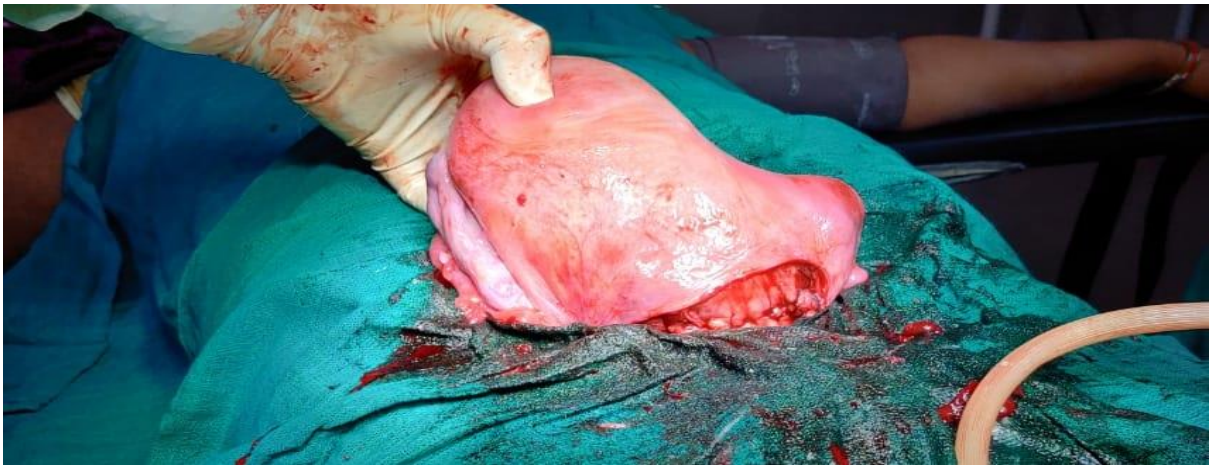

Figure 1: Right Unicornuate uterus with left associated atrophic uterine remnant

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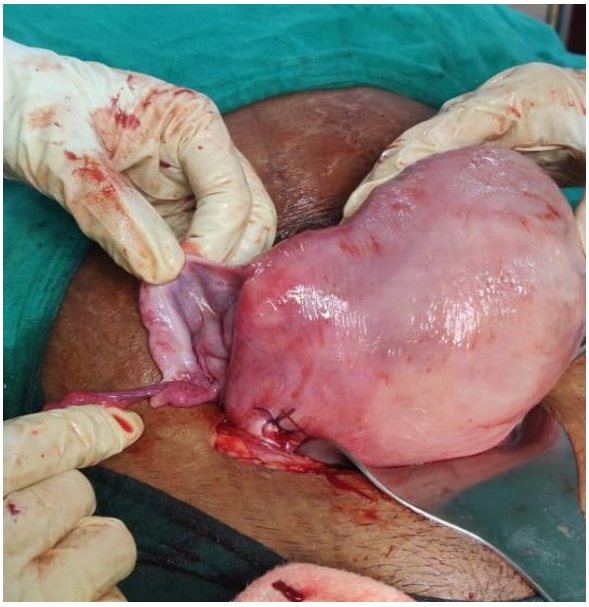

Figure 2: Left Unicornuate uterus with right associated atrophic uterine remnant

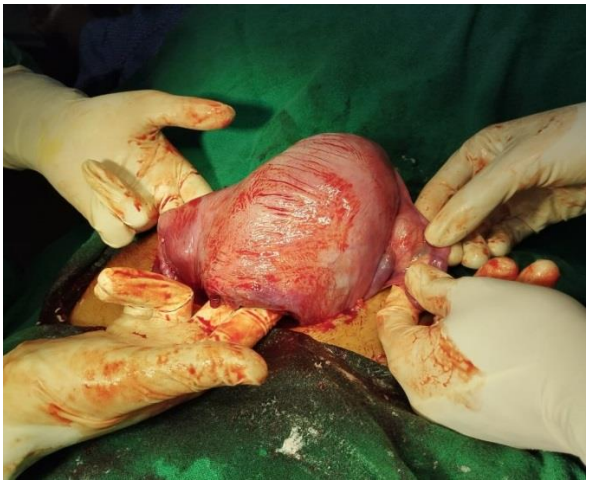

Figure 3: Left Unicornuate uterus with right associated atrophic uterine remnant

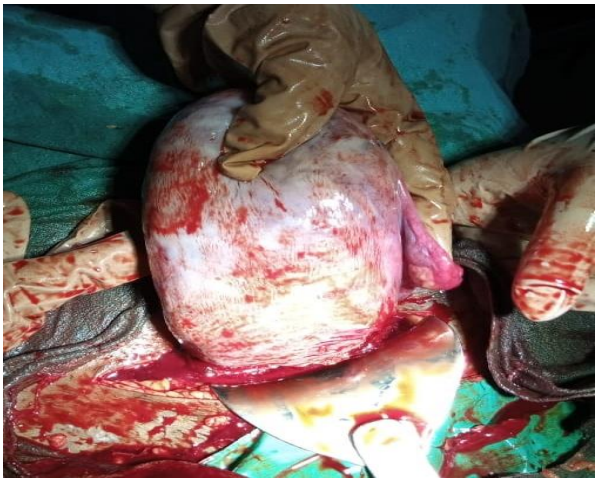

Figure 4: Unicornuate uterus (No rudimentary horn)

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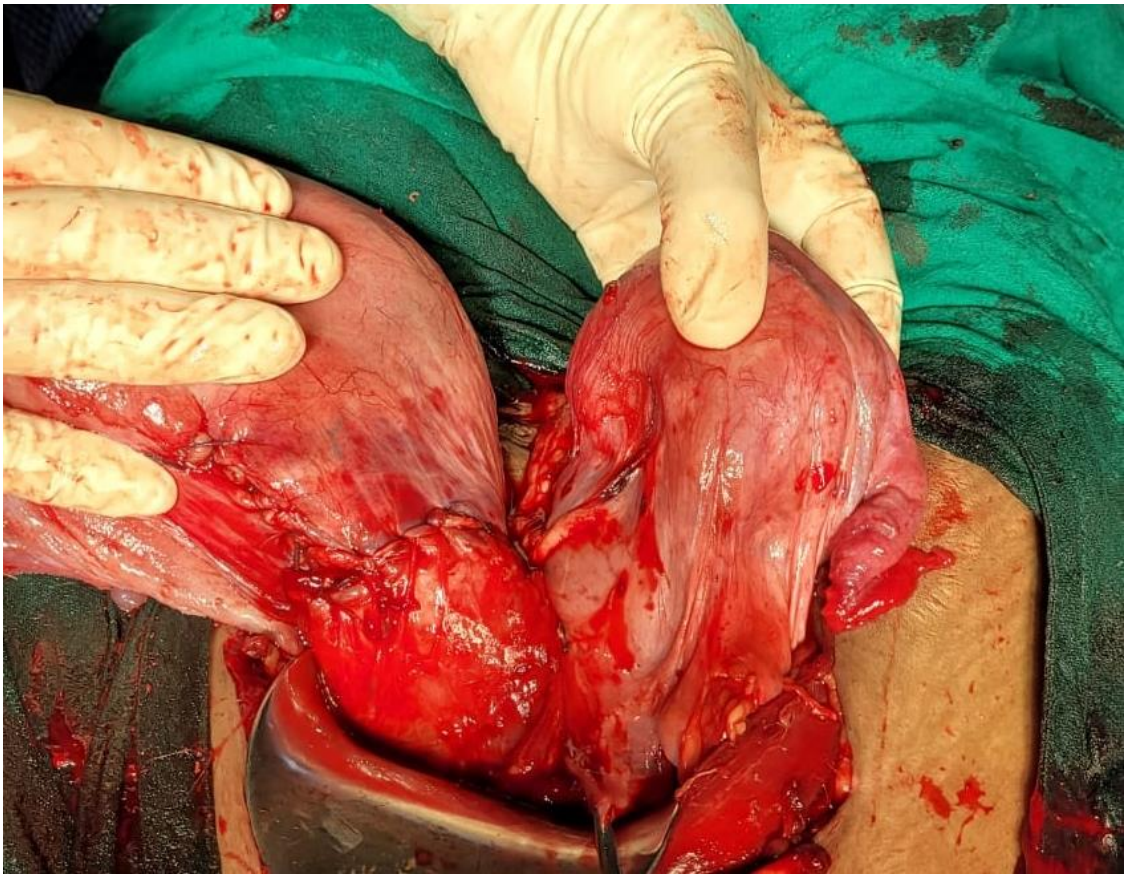

Figure 5: Uterus didelphys without longitudinal vaginal septum (with previous cesarean section likely in other horn and obstructed fetus on the other horn. Fetus was jam packed with uterus hugging the baby. Incision was extended to deliver the baby)

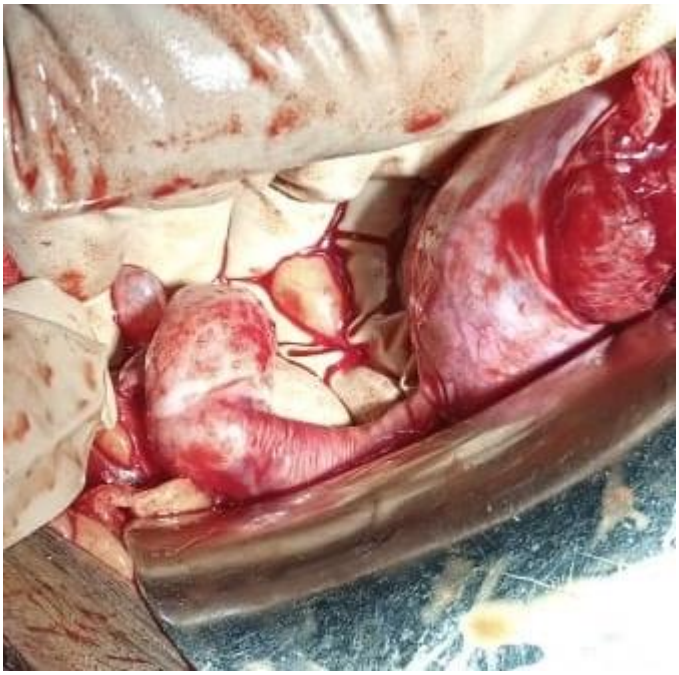

Figure 6: Ruptured left cornual ectopic in right unicornuate uterus with right associated distal atrophic uterine remnant

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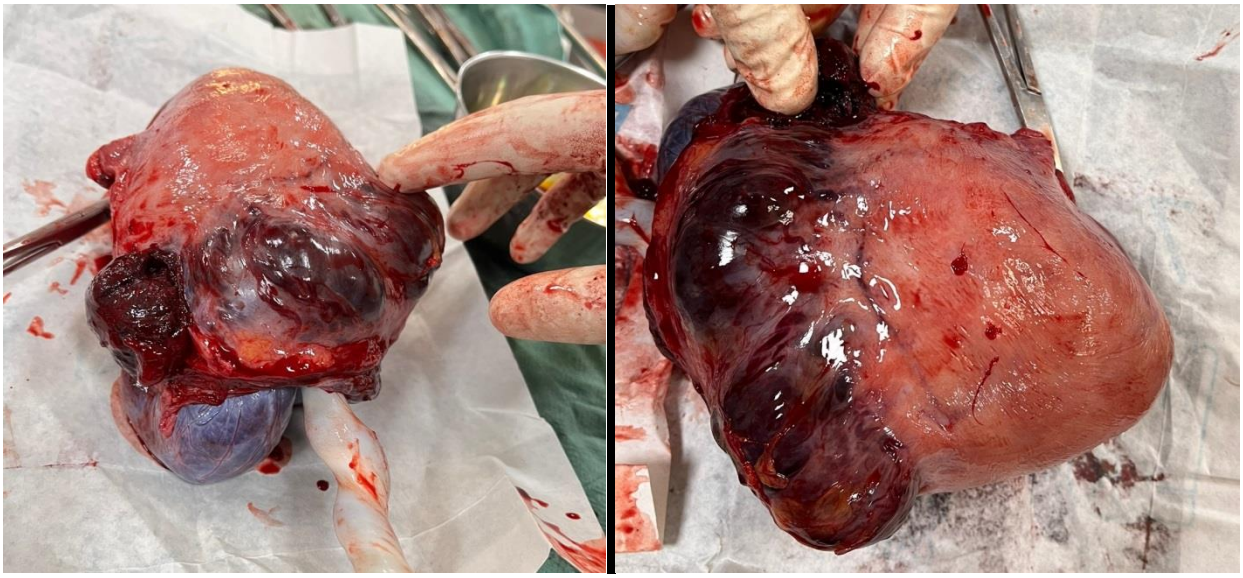

Figure 7: Bicornuate uterus with anterior placenta percreta with hemoperitonium. Baby was delivered by incision away from placenta and hysterectomy was done with placenta in situ. The other cornua was left undisturbed as it was embedded inside but tubal ligation was done

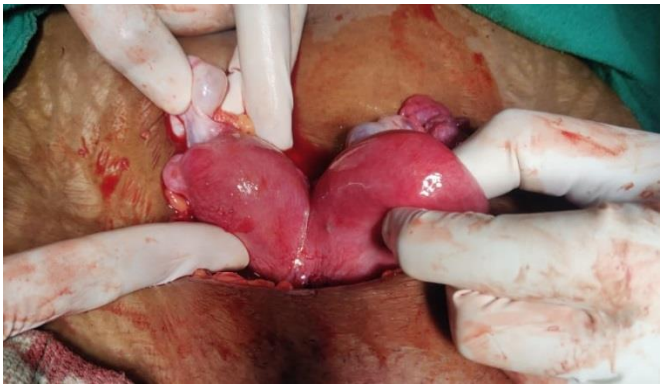

Figure 8: Bicornuate uterus

Conflict of interest: We donot have any conflict of interest

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