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**Case Report**

# Monoamniotic twin pregnancy in a previous caesarean with placenta accreta spectrum: a rare case report

**Laishram Trinity Meetei[1], Sheral Raina Tauro[1]*, Sonam Dolma[2], Chirom Pritamkumar Singh[1]**

[1]Department of Obstetrics and Gynaecology, Regional Institute of Medical Sciences, Imphal West, Manipur, India
[2]Department of Obstetrics and Gynaecology, Tawang District Hospital, Arunachal Pradesh, India

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***Correspondence:**
Dr. Sheral Raina Tauro,
E-mail: sheral29@gmail.com



## ABSTRACT

Monoamniotic twin pregnancy with placenta accreta spectrum is a rare condition. We are presenting a case of 36-year-old, G4P1021 at 27 weeks 1 day period of gestation with previous cesarean with monochorionic monoamniotic twin pregnancy with placenta previa with placenta accreta spectrum who underwent classical cesarean section with peripartum hysterectomy under general anaesthesia at 33 weeks and 2 days of period of gestation. This case gives an insight on the grey area of appropriate management in such cases with multiple high-risk factors and possible interventions to prevent complications.

**Keywords:** Cord entanglement, Monochorionic monoamniotic twin, Placenta accreta spectrum

## INTRODUCTION

Monoamniotic twins are diagnosed when a twin pregnancy is seen in a single amniotic sac with a single placenta. It is very rare condition, occurring with a frequency of 0.004% of all live births.[1] Its prevalence is less than 5% of monozygotic twin gestations and 1% of all twin pregnancies.[2] Perinatal mortality in monoamniotic twins is very high with reported rates ranging between 28% to 47%. The overall perinatal mortality rate was 11.1% after 16 weeks and 5.9% after 20 weeks gestation with nadir of 1.8% around 33 weeks.[3]

## CASE REPORT

A 36 years, G4P1021 at 27 weeks 1 day period of gestation with previous caesarean with monochorionic monoamniotic (MCMA) twin with placenta previa and suspected accreta was referred with bleeding per vagina and admitted in our hospital. After stabilizing her condition, she was planned to continue the pregnancy further as there was no further bleeding. Placenta accreta was suspected from the history and previous ultrasonography reports. She did not have any first trimester ultrasound. The anomaly scan which was done before referral showed MCMA twin with anterior placenta covering internal OS but accreta was not suspected. Third trimester ultrasound at 32 weeks showed a heterogeneous placenta with prominent, hypoechoic lakes, abnormal intra-placental vascularity and loss of the placental-myometrial interface at the level of the caesarean section scar, suggestive of placenta accreta spectrum disease (PASD). Magnetic resonant imaging (MRI) examination reaffirmed the diagnosis of PASD as evidenced by the presence of dark bands, loss of the placental-myometrial interface and myometrial thinning in T2 image (Figure 1).

Maternal and fetal monitoring was done for more than 6 weeks, 2 doses of injection betamethasone 12 mg was given 24 hours apart. There were no features of fetal compromise during the monitoring period. She had another bleeding episode around 33+2 weeks and the decision to terminate the pregnancy was taken. She underwent classical caesarean section with peripartum supracervical hysterectomy with right salphigo oophorectomy under general anaesthesia and delivered

two male babies weighing 1.76 and 1.7 kg. Cord entanglement was noted intraoperatively (Figure 2).

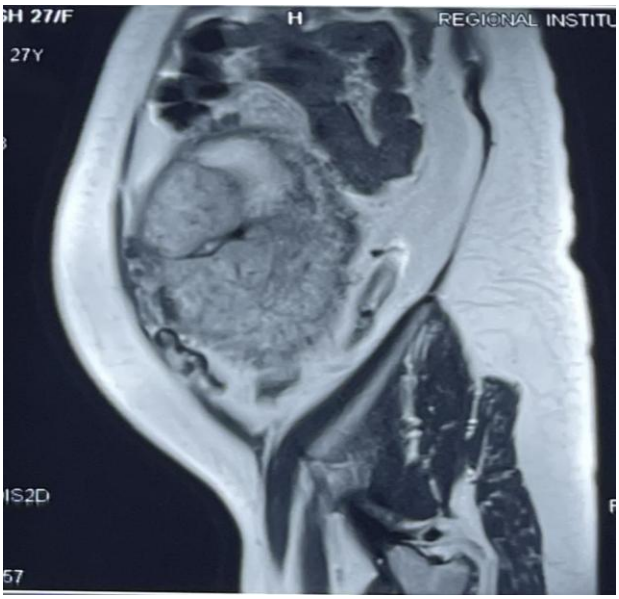


**Figure 1: MRI showing dark bands, loss of placental-myometrial interface and myometrial thinning.**

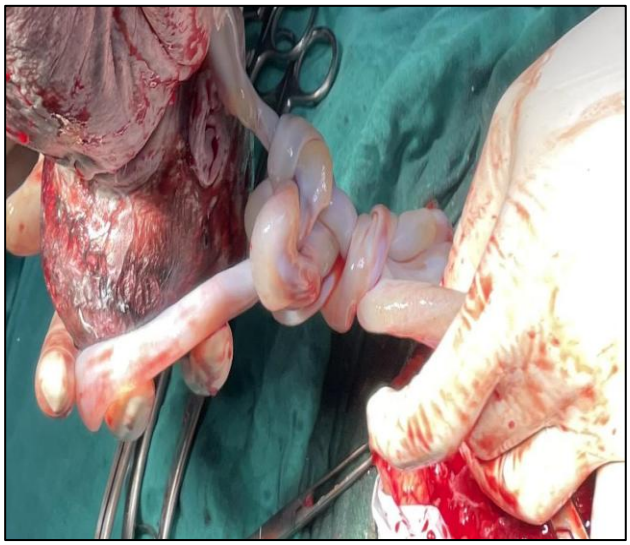

**Figure 2: Cord entanglement.**

Both the babies and the mother were discharged on postoperative day six. Histopathology of the hysterectomy specimen showed placenta increta.

## DISCUSSION

Placenta accreta is defined as abnormal trophoblast invasion of part or all of the placenta into the myometrium of the uterine wall.[4] Increasing rate of placenta accreta over the past few decades is likely due to a change in risk factors, most notably the increased rate of caesarean delivery. In a systematic review, the rate of placenta accreta spectrum increased from 0.3% in women with one previous caesarean delivery to 6.74% for women with five or more caesarean deliveries.[5] Additional risk factors include placenta previa, advanced maternal age, multiparity, prior uterine surgeries or curettage, and asherman syndrome. For women with placenta previa, the risk of placenta accreta is 3%, 11%, 40%, 61%, and 67%, for the first, second, third, fourth, and fifth or more caesarean, respectively.[6] Our case had risk factors for accreta like: previous caesarean with placenta previa and two abortions which were surgically treated. These placental aberrations threaten maternal life because of the risk of massive haemorrhage at the time of delivery. Additionally, there is significant morbidity because of the need for peripartum hysterectomy, transfusion of blood and blood products, damage to surrounding organs, and prolonged hospitalisation, including admission to an intensive care unit (ICU). In our case two units PRBC were transfused, she required ventilatory support and ICU care. Hence, early diagnosis is essential to reduce the complications.

MCMA is very rare, there are less than 5 reported cases of MCDA twin with placenta accreta spectrum disorder. The perinatal loss for MCMA twin is 28-47%.[7] Cord entanglement has been reported in upto 70% of monoamniotic twins with 50% or more deaths attributed to this complication.[2] Colour flow doppler is useful in the identification of umbilical cord entanglement in monoamniotic twin pregnancies and may provide a method of monitoring foetuses. Our case also had cord entanglement which was missed during the antenatal doppler but detected uneventfully intraoperatively. Incidence of congenital malformation of heart in monoamniotic twins is 5% (9-fold higher than singleton pregnancy).[8] In our case, the baby had ventricular septal defect (VSD). Recommended timing of delivery ranges between 32-35 weeks of gestation after lung maturation for monoamniotic twins. Diagnostic modalities of placenta accreta: ultrasonography (USG), colour doppler, MRI. Reasonable approach to perform ultrasound examination at approximately 18-20, 28-30, 32-34 weeks in asymptomatic patients. In our case doppler was performed and findings were suggestive of placenta accreta. MRI features were also associated with placenta accreta spectrum including dark intra-placental bands on T2 weighted imaging, abnormal bulging of placenta or uterus, disruption of the zone between uterus and placenta and abnormal or disorganized placental blood vessels. Colour doppler is better than MRI, colour doppler has 90% sensitivity and 96% specificity, whereas that of MRI is 94% sensitivity, 84% specificity.[9] MRI is not preferred recommended modality for the initial evaluation of possible placenta accreta spectrum, but may be useful for diagnosis of difficult cases such as posterior placenta previa and to assess depth of in suspected percreta cases. A decision analysis suggests that 34 weeks gestation is optimal time for delivery as the ability of most large centers to handle neonatal complications at that gestational age and also increased risk of bleeding after 36 weeks.[10] A window of 34 0/7-35 6/7 weeks of gestation is suggested

as preferred gestational age for scheduled caesarean delivery/hysterectomy in a stable accreta patient. Accepted treatment for placenta accrete is caesarean hysterectomy with placenta left *in situ* (Figure 3).

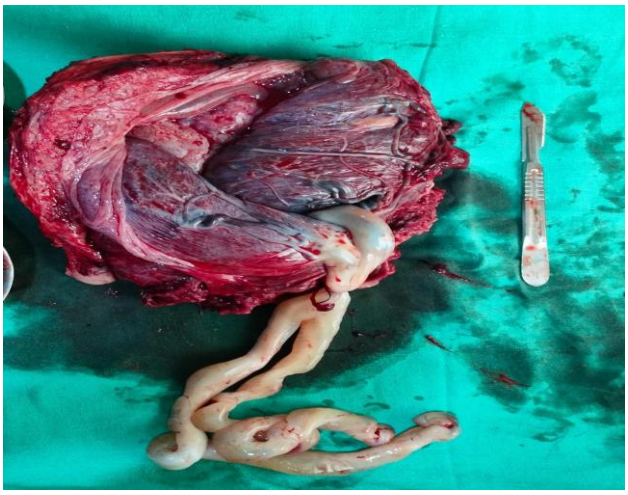

**Figure 3: Monochorionic placenta adherent to the uterus.**

## CONCLUSION

Monoamniotic twin pregnancy in a previous caesarean with placenta accreta spectrum is a rare case. It requires a multidisciplinary approach consisting of the radiologist, obstetrician, anesthesiologist, pediatrician and urologist in a tertiary care center. Morbidity and mortality can be avoided by early detection, early referral, proper work up, close monitoring of the patient and timely termination of pregnancy.

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