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CASE REPORT

Partial Molar Pregnancy Associated with Severely Anemic Singleton Pregnancy

Partha Guha Roy[1] · Sadhana Desai[1] · Sarabjeet Kaur[2] · Cyrus Contractor[3]

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Introduction

Partial molar degeneration of placenta with coexisting fetus is a rare incidence. The review of the literature suggests that the incidence is less than 0.05% [1, 2]. Anemia in a developing fetus due to fetomaternal hemorrhage is a rare complication in partial molar degeneration and can be fatal for the fetus and the neonate.

To diagnose fetal anemia, the Hb values has to be more than two standard deviations below the mean. An increase in peak velocity of systolic blood flow (PSV) in middle cerebral artery (MCA) can be picked up by Doppler ultrasound and is the hallmark for diagnosing fetal anemia in the antenatal period.

Case History

A 31-year-old second gravida conceived spontaneously while undergoing treatment for secondary infertility. Her menstrual cycles were normal with average number of bleeding days. Earlier, she had history of blighted ovum at 6–7 weeks of pregnancy and had undergone D&C for the same. Her past medical history was not significant. There was history of tuberculosis in the family. Her general pelvic examination was normal. Her hormonal profile and HSG were within normal limits.

Her first βhCG report which was done 2 days prior to missing her period was 3009.19 mIU/liter. At 6 weeks, USG confirmed a viable pregnancy. On USG, at 12 weeks, the placenta showed small cystic areas in fundus. She was admitted for 7 days for threatened abortion and was treated conservatively. Her NT scan and double-marker tests were normal. However, her quadruple marker screening test showed high risk of trisomy 21. She underwent amniocentesis which ruled out any chromosomal anomalies.

Her anomaly scan at 18 weeks showed a placental mass with multiple small cysts in upper part of the placenta with no vascularity and was consistent with a placental lesion (Fig. 1) chorioangioma. She was found to be anemic, and a detailed investigation confirmed iron deficiency—anemia. Rest of the blood parameters were normal.

USG of Placental mass 5.01 X 5.08 cm

At 20 weeks of gestation, the USG reported just adequate liquor and prominent fetal right renal pelvis along with cystic mass lesion in upper part of the placenta. She was followed up with USG and clinical checkup every 4 weeks.

The scan at 24 weeks showed reduced liquor with AFI between 9–10cm and a lobulated large heterogeneous lesion along right superolateral aspect and fundal region of placenta. It measured approximately 7.5 X 5.5 X 4.2 cm. and revealed multiple internal cystic mass with minimal internal vascularity. The fetal growth was corresponding to the gestational age.

The scan done at 27 weeks showed the above findings. However, there was mild dilatation of both pelvic calyceal systems. The patient was given two doses of betamethasone 12 mg, each at 24-hr interval. The scan at 32 weeks revealed

Dr. Partha Guha Roy is a M.D., DGO, Senior Consultant in Fertility Clinic & IVF Centre. Dr. Sadhana Desai is a M.D., FRCOG, Director in Fertility Clinic & IVF Centre. Dr. Sarabjeet Kaur is a M.D. (path), H.O.D. in Department of Pathology at Breach Candy Hospital. Dr. Cyrus Contractor is a M.D., DCH, H.O.D. in NICU, Breach Candy Hospital.

✉ Partha Guha Roy
pgr1311@gmail.com

1 Fertility Clinic & IVF Centre, 12, Spring Field, 19, Vachha Gandhi Rd, Gamdevi, Mumbai 400 007, India

2 Department of Pathology, Breach Candy Hospital, Mumbai, India

3 Department of Neonatal Intensive Care Unit, Breach Candy Hospital, Mumbai, India

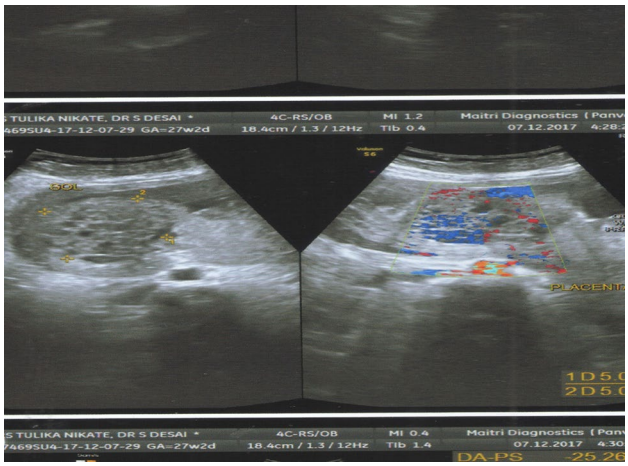

Fig. 1 Placental cystic mass of 5.01 × 5.08 cm detected antenatally by USG

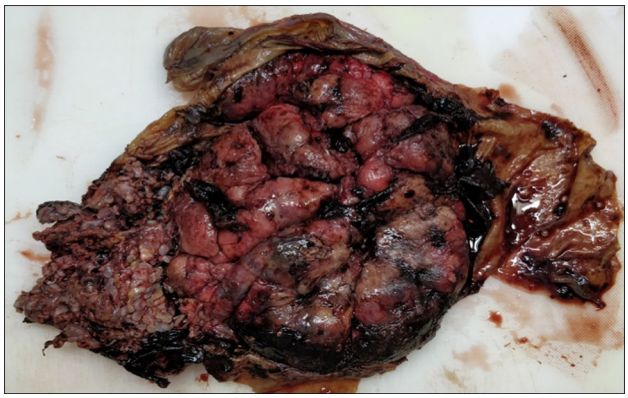

Fig. 2 Gross picture of the placenta showing normal (to the right) and abnormal molar degeneration of placenta (to the left). The abnormal molar placenta shows diffuse cluster of molar vesicles

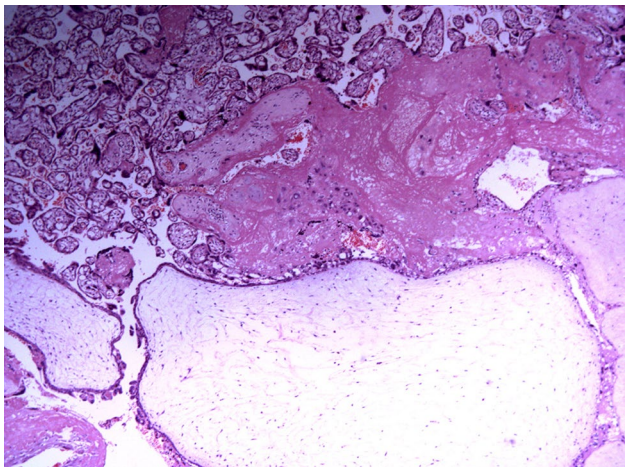

Fig. 3 Microscopic picture of the placenta showing molar villi (bottom half) and normal villi (top part) in the same section. (hematoxylin and eosin, 10 × magnification)

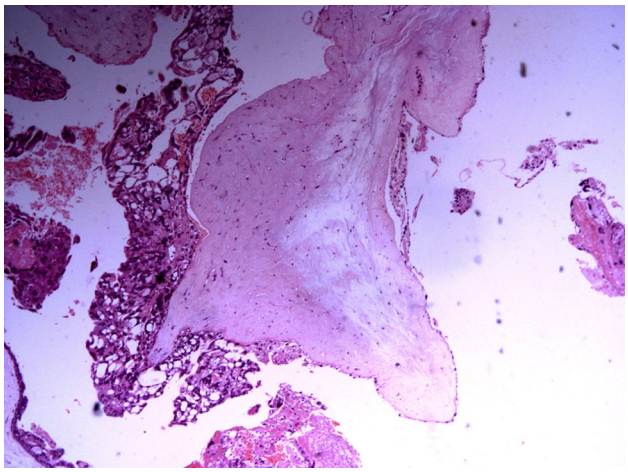

Fig. 4 Microscopic picture of the placenta showing molar villi with dilated cistern formation and trophoblastic proliferation (hematoxylin and eosin, 10 × magnifications)

moderate oligohydramnios with AFI 5–6 along with existing above-mentioned findings.

At 34 weeks, patient complained of absent fetal movement since last 24 hours. She was called for a checkup, and ultrasound showed severe oligohydramnios with fetal weight of 1956 gms. The color Doppler finding revealed a normal umbilical flow pattern with SD ratio of 2.6 and cerebral RI of 0.83.

Emergency LSCS was done at 34 weeks under spinal anesthesia. A live female baby was delivered by vertex weighing 1.625 Kg. The liquor had old meconium staining. Placenta and membranes were sent for histopathology (Figs. 2, 3 and 4). The neonate's cry was weak and looked very pale, so was shifted to NICU.

The neonate was put on NIV first but immediately deteriorated hemodynamically. So neonate was intubated and was put on PC mode. Hemoglobin (Hb) was very low 2.5 gm./ml. Two packed cell transfusions were given.

On day 2 of birth, baby had edema with low albumin. Hence, albumin infusion was given. Work up for severe anemia was done and found to be within normal limits. Kleihauer–Betke test showed 1% of fetal cells in mother's blood, which led to provisional diagnosis of severe fetomaternal hemorrhage.

Baby was extubated on day 3 and gradually weaned from NIV to CPAP and was off CPAP on day 4. Baby was icteric on day 3. Severe SSPT was started which was stopped on day 7 of birth. Serial USG of skull was done in view of anemia with prematurity and was found to be normal. Retinal

checkup was done and was found to be normal. The baby was discharged on day 15 of birth.

Discussion

In the presented case, βhCG done 2 days prior to missing her period was quite high (3609 miU/ml). At 12 weeks, ultrasound detected a placental mass with multiple small cysts with no vascularity in upper part of placenta. The two findings were in favor of partial molar changes in contrast to chorioangioma and placental mesenchymal dysplasia (PMD). Chorioangioma has a large feeding vessel inside it which differentiates it from molar pregnancy [1]. PMD has absent or low venous signal in contrast to high-velocity flow in chorioangioma and partial molar pregnancy [3]. Antenatally to detect anemia in the fetus PSV of MCA is reliable. All the sonographies in this case never showed any alteration in PSV in MCA.

Grossly two types of placental pathology are identified, viz. focal and diffuse degeneration [4]. In diffuse placental degeneration, there are more chances of fetal wellbeing getting jeopardized. Survival of fetus with partial molar pregnancy is influenced by karyotyping, extent and size of molar degeneration, fetal anemia and other obstetric complications. This fetus had a normal karyotype, and the focal molar change allowed sufficient placental circulation for its growth upto third trimester. The liquor started diminishing from 24 weeks onwards, and at 34 weeks, there was severe oligohydramnios with less fetal movements. This placental insufficiency is likely due to the onset of increased molar degeneration of placental mass. The severe anemia where the Hb dropped to 2.5 gm/ml can be attributed to fetomaternal hemorrhage (Kleihauer–Betke test—1% of fetal cells in mother's blood) during 32–34 weeks of pregnancy.

Conclusion

The literature review [4] shows few live births with partial molar pregnancy when there is no clinical complication. Our case is one such example.

Compliance with Ethical Standards

Conflict of interest The authors declare that they have no conflict of interest.

Informed consent Consent from the patient was taken to publish her case report.

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About the Author

Dr. Partha Guha Roy is a senior clinical consultant in Fertility Clinic & IVF Centre, Gamdevi, Mumbai, with 26 years of experience. His postgraduation and training were from Medical College, University of Calcutta. His field of interest is in high-risk pregnancy and assisted reproduction technology. He has co-authored many chapters on infertility in various textbooks. He is a member of European Society of Human Reproduction and Embryology.