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**Case Report**

# Chorioangioma with pre-eclampsia and IUGR: a case report

**Kruti P. Doshi*, Reena J. Wani, Aditi A. Khare**

Department of Obstetrics and Gynecology, HBTMC and R N Cooper Hospital, Mumbai, Maharashtra, India

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***Correspondence:**
Dr. Kruti P. Doshi,
E-mail: kruts_doshi@yahoo.co.in



## ABSTRACT

Chorioangioma is a non-trophoblastic benign tumour of the placenta, arising from the primitive chorionic mesenchyme with an estimated incidence of 0.6% diagnosed antenatal on ultrasound imaging. Small chorioangiomas are often asymptomatic with a frequency of about 1%, giant chorioangiomas more than >5 cm in diameter, are rare seen in 1:3500 to 1:16000 births and are associated with maternal and fetal complications. We report a case of 23-year-old, primigravida 36.4 weeks of gestation with pre-eclampsia with asymmetrical intrauterine growth restriction (IUGR), ultrasound suggestive of large placental chorioangioma 8×6.8 cm. This patient despite having large tumour and being diagnosed late at 35 weeks had a favourable maternal and fetal outcome. Histopathology confirmed the diagnosis.

**Keywords:** Chorioangioma, Pre-eclampsia, IUGR

## INTRODUCTION

Chorioangioma is a common non-trophoblastic benign placental vascular tumour arising from primitive mesenchyme with the incidence ranging from 0.6% to 1%.[1] Chorioangioma which is large (more than 5 cm) is associated with adverse maternal and fetal complications.[2,3] Most of the cases about 1% with small tumours of size <5 cm remains asymptomatic.[4] Prenatal diagnosis is made with ultrasonography with colour doppler. We report a case of large chorioangioma diagnosed in the 3rd trimester associated with asymmetrical intrauterine growth restriction and pre-eclampsia.

## CASE REPORT

A 23-year-old primigravida 36.4 week of gestation was referred from private hospital with ultrasonography suggestive of large vascular circumscribed placental mass for further management.

Patient was registered and had an uneventful antenatal course. Her anomaly scan done in the second trimester was normal. On routine growth scan at 35 weeks she was diagnosed with a large vascular placental mass of 8×6 cm with asymmetrical intrauterine growth restriction hence patient was referred to our tertiary care hospital.

On general examination her blood pressure was 150/90 mm Hg with proteinuria of +1 on dipstick with bilateral pedal oedema grade II, systemic examination was within normal limits.

On obstetric examination uterine height was less to period of gestation with SFH of 32 cm, longitudinal lie and cephalic presentation with floating head, fetal heart sounds 142 bpm, regular.

Laboratory investigations were: haemoglobin- 8 gm%; TLC- 33,000; platelet- 2,33,000; CRP- positive; INR- 1.33; kidney function test- WNL; liver function test-WNL; urine culture- no growth; high vaginal swab culture- no growth and TSH- 2.33.

Ultrasound with colour doppler imaging was single, cephalic fetus with 2 loops of cord around neck, asymmetrical IUGR-MGA 31 weeks, 1.73 Kg, AFI- 14 cm (WNL) with a posterior placenta, large hypoechoic

placental mass- 8×6.8 cm was noted near umbilical cord insertion (Figure 1). Colour doppler study was within normal limits with no evidence of foetal anaemia MCA PSV= 37 and no utero or fetoplacental insufficiency. Colour doppler was suggestive of increased vascularity in the placental mass s/o chorioangioma (Figure 1).

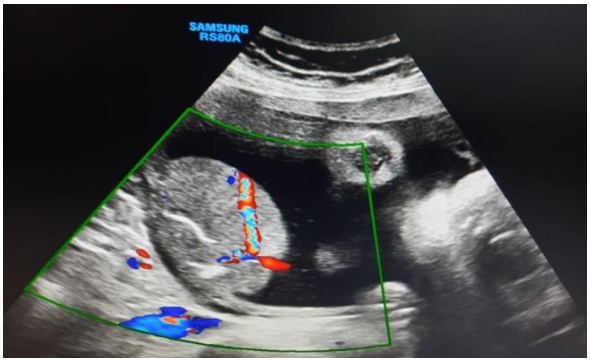


**Figure 1: Colour doppler showing large hypo echoic mass- 8×6.8 cm with increased vascularity near umbilical cord insertion.**

Patient was given 2 doses of injection betamethasone for fetal lung maturation and intravenous antibiotics

She was planned for elective caesarean section at 37 weeks in view of preeclampsia with asymmetrical IUGR with 2 loops of cord around neck with chorioangioma.

Patient was given 4 FFPs and 1 whole blood intraoperative. During caesarean section baby delivered and cried immediately, was LBW with weight of 1.7 Kg, transferred to NICU. Placenta and membranes were expelled out completely and spontaneously. A well circumscribed spherical mass was noted on the edge of placenta measuring 8×6 cm with vessels travelling from the placenta to the tumour with eccentric cord insertion and sent for HPR.

Uterus was well contracted post-delivery. After the uterine closure prophylactic bilateral internal iliac artery ligation was done. Post-partum period was uneventful, patient was given intravenous antibiotics and injectable iron. Wound check on day 14 was healthy.

Neonatal course was baby was admitted in neonatal intensive care unit in view of low birth weight and respiratory distress. Baby was put on oxygen by nasal cannula and RT feeds and intravenous antibiotics. Investigations were within normal limits. No anaemia or thrombocytopenia was noted. Baby was discharged on day 19.

HPR report was on histopathology gross examination, placenta 20×15×4 cm weighing 500 gm with eccentric attachment of umbilical cord, there were two well circumscribed spherical lesion of 8×7×3.5 cm and 5×2.5×2 cm with rest of the placenta having areas of infarction (Figure 2-3).

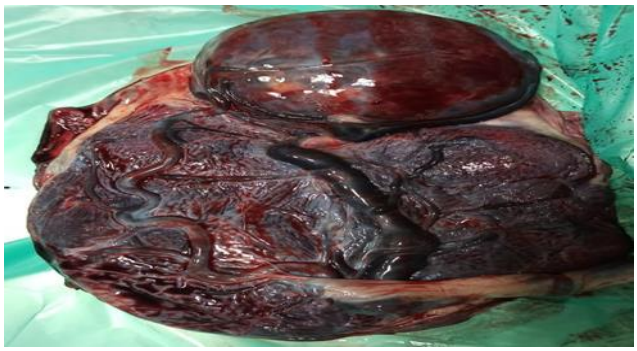

**Figure 2: Chorioangioma on the edge of placenta measuring 8×7×3.5 cm and 5×2.5×2 cm with eccentric cord insertion.**

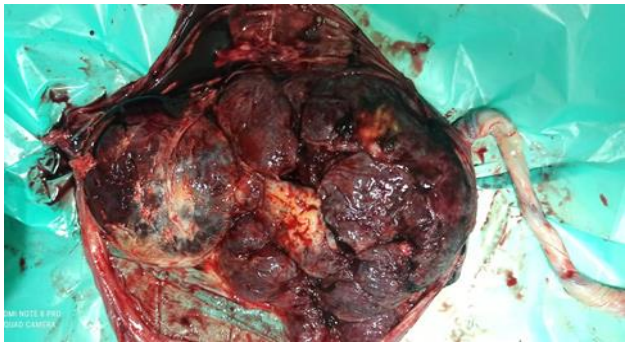

**Figure 3: Maternal surface of placenta showing the chorioangioma mass with multiple areas of infarction.**

On microscopic examination proliferation of small size capillaries with intervening thick-walled vessels and areas of calcification was noted suggestive of chorioangioma.

## DISCUSSION

Placental chorioangioma is a benign vascular tumour arising from the primitive angioblastic chorionic tissue of the placenta.

Pathogenesis was there are 3 histological patters angiomatous, cellular and degenerate of which most common is angiomatous as it was in our case. These lesions can also be referred to as placental hamartomas but without any malignant potential.[5,6]

Diagnosis was antenatal ultrasound imaging with colour doppler is used for diagnosis. On ultrasound imaging it appears as a well demarcated complex echogenic mass different from rest of the placenta found near the insertion of umbilical cord, protruding into the amniotic cavity and separate from the myometrium as was diagnosed in our case (Figure 1).[6]

Colour doppler sonography identifies the feeding vessel of chorioangioma, which arises from the placenta and has the

same pulse rate as in the umbilical artery which was demonstrated in our case (Figure 1).[7] It may have arteriovenous or arterioarterial or venovenous connections that causes to shunting of blood resulting in a big placenta which can extend up to internal os.[7]

Differential diagnosis was chorioangioma is differentiated from other masses like a blood clot, placental teratoma and leiomyoma using the vascular doppler study.[8]

Complications was maternal complications include polyhydramnios, premature delivery, and hypertensive disorders of pregnancy, abruptio placenta and placenta previa, post-partum haemorrhage.[2]

Fetal complications include growth restriction, prematurity, cardiac failure, non-immune hydrops fetalis and stillbirths due to arteriovenous shunts in large chorioangiomas which impair the fetal circulation by increasing the venous return to the heart resulting in tachycardia, cardiomegaly and hypervolemia.[3,9]

Neonatal complications include anaemia, thrombocytopenia, congenital anomalies or congestive cardiac failure. Perinatal mortality is high in large chorioangioma.[10,11] In our case we had a favourable fetal outcome despite large tumour size and low birth weight and RDS at birth.

Management was ultrasound monitoring is necessary for early detection of complication and timely interventions. The time and mode of delivery needs to be assessed and varies for every case depending upon the complications and gestational age.

The interventions are directed towards individual complications. Early diagnosis can help in reducing the blood supply of the tumour by fetoscopic laser coagulation of the feeding vessels.[12] Polyhydramnios may be treated with serial amnioreduction and indomethacin therapy. Fetal anaemia is corrected with intrauterine fetal blood transfusion.[13]

However, in our case the patient presented at 36.4 weeks with preeclampsia with IUGR without polyhydramnios or fetal anemia.

Therefore, we administered her 2 doses of steroids for accelerated foetal lung maturation followed by elective caesarean section.

## CONCLUSION

Though it is a rare tumour several maternal and fetal complications warrant early diagnosis and timely interventions and delivery in tertiary care centres.

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