

Amniotic Fluid Abnormality with Giant Chorioangioma of Placenta: Rare Case Reports

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ABSTRACT

Chorioangioma is the rare benign non trophoblastic tumor of placenta, which derives from primitive chorionic mesenchyme. Large chorioangioma has unfavourable effect on both mother and the fetus. We describe two case reports of large chorioangioma of placenta.

Keywords: Benign placental tumor, primitive chorionic mesenchyme, ultrasound, giant chorioangioma, maternal complications, fetal complications

INTRODUCTION

Chorioangioma is the most common benign tumor of placenta with an incidence of 0.6%.¹ However, giant chorioangioma with a diameter of greater than 5 cm is very rare with an incidence of 1:3500 to 1:9000.² It was first described as the most common placental tumor of the placenta by Clarke in 1978.³ The clinical significance is related to te size of the tumor.

Small tumors are usually asymptomatic and do not complicate the course of pregnancy but giant tumor greater than 5cm may lead to several maternal complications like polyhydramnios, preterm labour, abruption placenta, malpresentation, increased risk of cesarean section, postpartum haemorrhage, cervical incompetence and fetal complications include fetal anemia, fetal cardiomegaly, fetal growth restriction, intrauterine fetal death, nonimmunologic fetal hydrops, fetal cardiac failure.^{4,5} Perinatal mortality is as high as 30-40%.⁶

We report here two giant size chorioangioma of placenta.

CASE REPORT-1

A 24-year-old primigravida was first time visited to our labour room at 34 weeks of period of gestation with pain in lower abdomen for last 2 days. She had history of gradual abdominal distension since one month. On examination, her blood pressure was 120/80 mmHg, abdomen was tense, overdistended upto xiphisternum, skin was shiny, dilated veins were visible, clinically liquor was increased, fetal parts were not palpable, moderate contractions were present. Fetal heart localized with difficulty with fetal heart rate 180bpm. She was afebrile, her temperature was 98.4 F and pulse rate was 90 bpm. On per vaginal examination, os was 4 cm dilated, early effaced, vertex at -3 station, Membrane present, controlled artificial rupture of membrane done, thick meconium-stained liquor drained. She was neither anemic nor

diabetic. Earlier patient had two ultrasounds, one at 10 week and another one at 18 weeks of period of gestation which were normal.

Recent ultrasound showed a single live intrauterine fetus corresponding to 34 weeks of gestation with polyhydramnios (AFI =28 cm). There were no gross structural anomalies.

A well-defined hypoechoic lesion of around 13.3 * 12.8 cm seen in anterior placental chorion region suggestive of placental chorioangioma (Figure 1).

Patient underwent emergency caesarean section on the same day of admission in view of thick meconium-stained liquor with persistent fetal tachycardia. Blood and blood products kept ready and high-risk consent was taken as there were increased risk of postpartum haemorrhage, she delivered a baby boy of 1.83 kg with APGAR score 6 and 8 at 1 and 10 minutes respectively, and kept in NICU for observation for 6 days.

Intraoperative and postoperative period was uneventful.

Both mother and baby discharged on post operative day 6 under stable condition.

On macroscopic examination of placenta, Placenta attached with umbilical cord weighing 900 gm and measure 19* 17* 8 cm. The fetal surface is covered with unremarkable membranes. The maternal surface shows unremarkable cotyledons and three polypoidal tissue masses attached with stalk together measuring 15*8*7 cm. The largest polypoidal tissue measures 9*5*3 cm. The umbilical cord is attached centrally to the fetal surface and measures 38 cm in length. On cutting, three vessels are identified. (Figure 2).

Histopathology examination revealed a benign vascular tumor composed of thin-walled capillary channels in loose stroma with multiple congested and dilated blood vessels along with fibrinoid hemorrhagic material which was suggestive of angiomatous pattern of chorioangioma.



Figure 1: USG suggestive of chorioangioma placenta

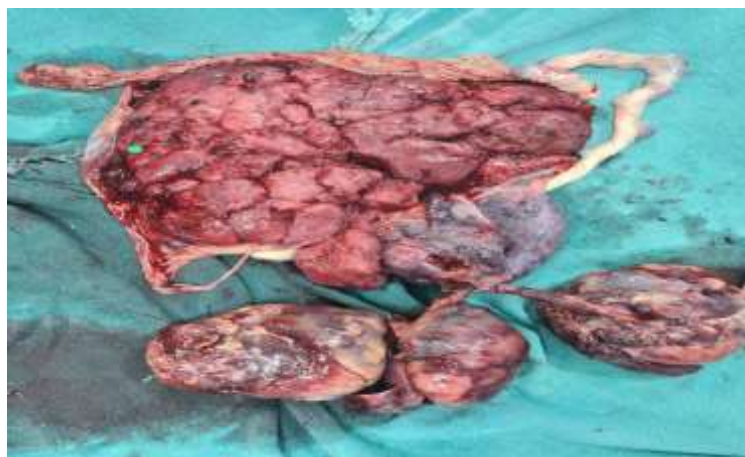


Figure 2. Gross appearance of placenta with three polypoidal masses (chorioangioma)

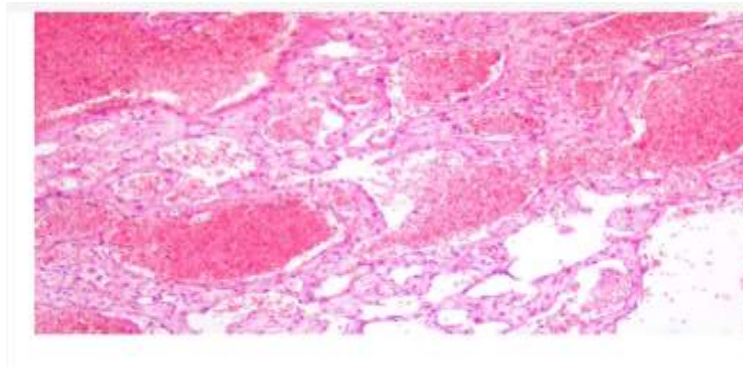


Figure 3. HPE showing benign vascular tumor (H&E, X100)

CASE REPORT -2

A 23-year-old primigravida came to OPD at 32 weeks of gestation with complain of bleeding per vaginum for 15 days and pain in lower abdomen for 1 day.

She had Ultrasound done at private hospital at 22 week of gestation which revealed a hypoechoic lesion of 7.4x 5.1 cm near fundal region of placenta with flow on colour doppler and amniotic fluid was adequate. She was subjected to serial ultrasound.

On subsequent ultrasound done at 27 week of gestation the size increased to 10.6x7.9 cm arising from amniotic surface with internal calcifications with minimal vascularity, liquor was decreased.

Repeat scan done on admission at 32 weeks of gestation, depicted the same hyperechoic

mass with similar size with low vascularity with oligohydramnios (AFI<4), with breech presentation with MCA PSV<1 mom and patient was kept for conservative management (Figure 4).

Patient underwent Emergency LSCS at 34 weeks i/v/o Breech with oligohydramnios with preterm labour and delivered a baby girl of 1.75 kg with Apgar score 7 and 9 at 1 and 5 minutes. Baby was shifted to NICU for observation and was discharged after 6 days.

On gross examination, placenta weighed 800gm. A lobular mass measuring 8x7 cm was present on the fetal surface of placenta (Figure5).

Histopathology of placental specimen was suggestive of degenerative chorioangioma of placenta. (Figure 6)

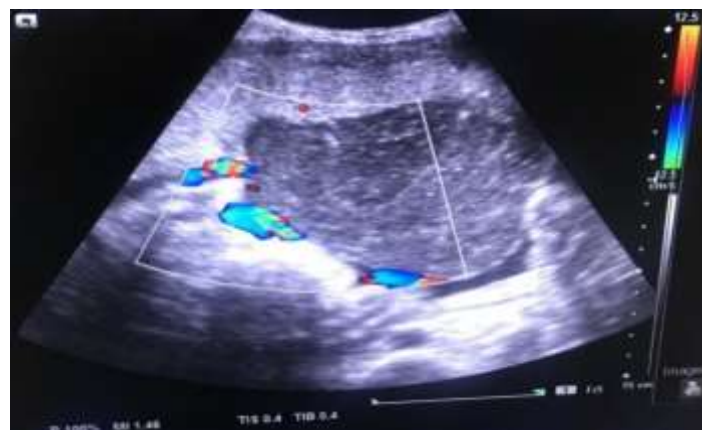


Figure 4. USG showing chorioangioma

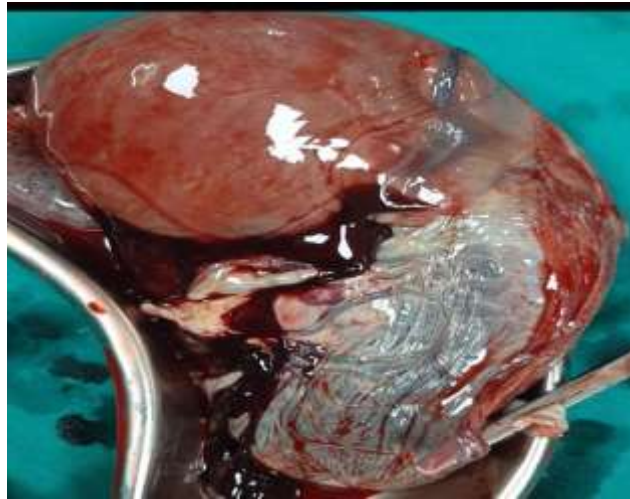


Figure 5. Fetal surface of placental with chorioangioma

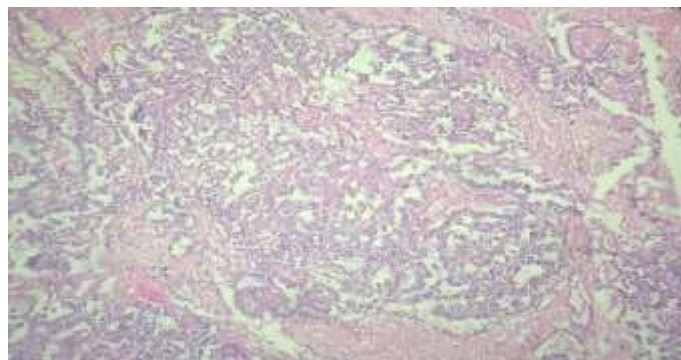


Figure 6. Histopathology showing degenerative nature of chorioangioma

DISCUSSION

A chorioangioma is a benign non trophoblastic tumour of the placenta arising from primitive chorionic mesenchyme.⁷ They are mostly found in association with elderly primigravida, hypertension, twin pregnancies and diabetes.¹

Based on histological features, chorioangioma is classified by Marchetti into three types:⁸

- 1) Vascular (Angiomatous): most common type
- 2) Cellular (Immature): mainly cellular elements packed compactly.
- 3) Degenerative: Mature type with degenerative changes, calcification, hemosiderin and infarcts. Each type is believed to represent a phase of tumor development.

This is seen as a hypo- or hyperechoic circumscribed mass that is distinct from the placenta at gray- scale ultrasound examination.

Tumors of less than 5 cm are usually asymptomatic. Large chorioangioma act as arteriovenous shunts and causes complications. Maternal complications are preterm labour, placental abruption and polyhydramnios, postpartum haemorrhage and fetal complications are congestive heart failure, non-immune hydrops, hemolytic anemia, fetal growth restriction, fetal death.^{4,5}

Serial sonogram every 1-2 weekly should be performed to assess the growth of tumour, growth of fetus and development of hydrops.

Various techniques with varying success rates have been tried such as serial fetal transfusions, fetoscopic laser coagulation of vessels supplying the tumor, chemosclerosis with absolute alcohol, and endoscopic surgical devascularisation.⁹ Polyhydramnios is treated with therapeutic amniocentesis or maternal indomethacin therapy.

In case 1, tumor was vascular which was associated with polyhydramnios. Large

chorioangioma associated with polyhydramnios leads to high perinatal morbidity and mortality. However, in our case there was successful outcome with conservative management.

In case 2, the tumor was vascular initially, however spontaneous decrease in vascularity of the tumor lead to gradual decrease in liquor volume, allowing expectant management and with successful outcome.

CONCLUSION

Chorioangioma is the rare benign tumor of placenta which represents the challenge with its potentially serious complications which adversely affects pregnancy outcomes. Sonographic assessment of echogenicity and vascularity of large chorioangioma appears to be detrimental in predicting the clinical outcome of pregnancy.

Spontaneous regression of tumor vascularity with subsequent resolution of hydramnios may occur while vascular and hypoechoic tumor are associated with higher incidence of pregnancy complications, favourable outcome is expected in avascular and hyperechoic tumor.

Declaration by Authors

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