PLACENTAL CHORIOANGIOMA: A CASE REPORT

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ABSTRACT: Polyhydramnios is a common problem during pregnancy but massive hydramnios is relatively rare especially that due to placental tumour. This case report presents a case of large placental chorioangioma with massive polyhydramnios leading to preterm labour.
KEY WORDS: Placental tumour, polyhydramnios, chorioangioma.

INTRODUCTION: Chorioangioma constitutes the commonest benign tumour of placenta [1.] Small chorioangiomas are usually asymptomatic but large (≥5cm) and multiple chorioangiomas are often associated with adverse effect on mother and fetus [1]. Chorioangiomas are usually diagnosed incidentally on obstetrical U.S.G and colour doppler.

CASE REPORT: A twenty year old primigravida came to our hospital with complain of pain lower abdomen with seven months amenorrhea .The pregnancy was uneventful till she came to hospital. On general examination, patient's general condition was satisfactory except for mild degree of pallor. Her systemic examination was within normal limit except for respiratory rate of 40/min with bilateral clear chest on abdominal examination, abdomen was unduly enlarged .On palpation, uterus was term size with no palpable fetal parts, excess of liquor (polyhydramnios?) and mild uterine contraction present .On auscultation FHS could not be localised .On bimanual examination, os was 3 cm dilated, 80 % effaced, membrane was present, no presenting part felt and pelvis was adequate.

A clinical diagnosis of 28 weeks pregnancy with unknown presentation with polyhydramnios in preterm labour was made.

On investigation, her routine investigations were within normal limit except haemoglobin 9.5 gm% and trace albuminuria, her blood sugar and GTT were within normal limit. Obstetrical USG (figure-1) showed that there was single live intrauterine fetus of about 28 weeks 2 days (weight 1300 gm+100gm) with breach presentation, with no obvious congenital anomaly and marked polyhydramnios (AFI:40cm). Placenta was abnormally large and thick (70 mm antero posteriorly) placenta was anterior and in upper segment. A large (about 62×75mm) rounded hypoechoic to echogenic solid mass seen in placenta towards fetal surface in fundal region. Color Doppler showed blood vessels around this mass (tumour mass in placenta?). No evidence of abruption seen, internal os dilated and cervix was short.

The patient was given betamethasone 12 mg IM 24 hours apart and duvadilan drip was started. But after 6 hours of second dose of betamethasone patient passed in active labour. The patient progressed well in labour and delivered vaginally a preterm female baby by breech. Baby weight was 1800gm and she cried just after birth and APGAR at 1 minute 5/10 and at 5 minutes 7/10. Baby was apparently normal. Oxytocin drip was continued after 15 minutes placenta was

expelled spontaneously followed by expulsion of tumour mass with a gush of blood. Then there was no PPH. Postpartum period was uneventful.

Placenta and tumour mass was sent to HPE.

Gross view of placenta, cord and mass: - Placenta measuring 19×10×5 cm with eccentrically placed umbilical cord. There was nodular black growth measuring 9×7cm seen (figure-2). There was small clot and weight of placenta and cord was 800gm. Cut section showed blackish haustration over nodular area and rest of placenta was normal looking. Umbilical cord showed three vessels.

Histopathological report showed numerous thin walled fetal vessels with myxomatous intervening stroma enriched tissue i.e. Placental chorioangioma.

DISCUSSION: Chorioangioma, originally described by Clarke in 1978 [2], is the most common tumour of placenta with reported incidence of about 1%[3]. Most chorioangiomas are small and are found incidentally by USG. It is a matter of debate that actually chorioangioma is not a neoplasm but most likely a hamartoma of primitive chorionic mesenchyme. Chorioangioma have no malignant potential. They were seen more in multiple pregnancies and in female baby.

Three histopathological types have been described by Maschetti [4] i.e. angiomatous (capillary), cellular and degenerative. Angiomatous pattern is most common and has numerous small areas of endothelial tissue, capillaries and blood vessels surrounded by placental stroma. Cellular pattern has abundant endothelial cells within loose stroma and hyalinization. Degenerative pattern has calcification, necrosis and hyalinization.

Large (≥5cm) or multiple chorioangiomas have been reported to occur at a rate of 1:3500 to 1: 16,000 births. The largest retrospective study of 22000 placental examinations showed 138 chorioangiomas with an incidence of 0.6[5]%. Although most chorioangiomas are asymptomatic but large and multiple chorioangioma have dismal prognosis due to their high association with maternal and fetal complications (ranging from 30% to 50%). Maternal complications are preeclampsia, preterm labour, placental abruption, and polyhydramnios. Of the various reported clinical complications, the correlation of chorioangiomas with hydramnios and preterm delivery is significant. Among fetal complications fetal hemolytic anemia, hydrops, fetal thrombocytopenia, fetal cardiomegaly, intrauterine growth restriction, fetal congestive cardiac failure are common. Placental chorioangioma are not associated with fetal malformation and fetal death.

Pathophysiology of complications is not well understood. Polyhydramnios may occur due to (a) transudation of fluid caused by mechanical obstruction of blood flow by the tumour near the cord insertion (b) increased transudation of fluid through large vascular surface area, and (c) functional insufficiency of the placenta secondary to bypassing fetal circulation via shunt mechanism into tumour vascular bed. Chorioangioma can provide arteriovenous shunt that can lead to fetal cardiomegaly and fetal heart failure. There may be severe fetal anemia due to chronic fetal to maternal bleeding.

At gray scale USG. Chorioangioma is a hypo or hyperechoic circumscribed mass that is distinctly different from placenta and contains anechoic cystic areas. The tumour classically protrudes into the amniotic cavity from the fetal surface near the cord insertion. Use of doppler to

differentiate from placental teratoma, blood clot and leiomyoma was first demonstrated by Bromley and Benacerraff[6]. On colour doppler images, anechoic cystic areas demonstrate pulsatile flow, a finding consistent with vascular channels with in the tumour, this finding distinguishes chorioangioma from a placental hematoma. Echo pattern of blood clot differs with time, while chorioangioma remains same. Partial mole has diffuse pattern and leiomyoma is seen in maternal surface [10].

The differential diagnosis of placental tumour includes partial hydatidiform mole, placental hematoma, teratomas, metastases and leiomyoma. In case, when USG findings are equivocal, MRI is a potential problem solving modality.

Chorioangioma is usually treated with expectant management, as the majority are asymptomatic. Small ones are usually monitored with US every 6-8 weeks, whereas large tumour requires serial US examination, every 1-2 weeks. In situation when maternal and fetal complications necessitate intervention, the possible treatments include serial fetal transfusions [7], fetoscopic laser coagulation of vessels supplying the tumour[8], chemosclerosis with absolute alcohol [9] and endoscopic surgical devascularization. Polyhydramnios is treated with therapeutic amniocentesis and maternal. Indomethacin therapy. Steroid administration for acceleration of fetal lung maturity before 34 weeks is indicated.

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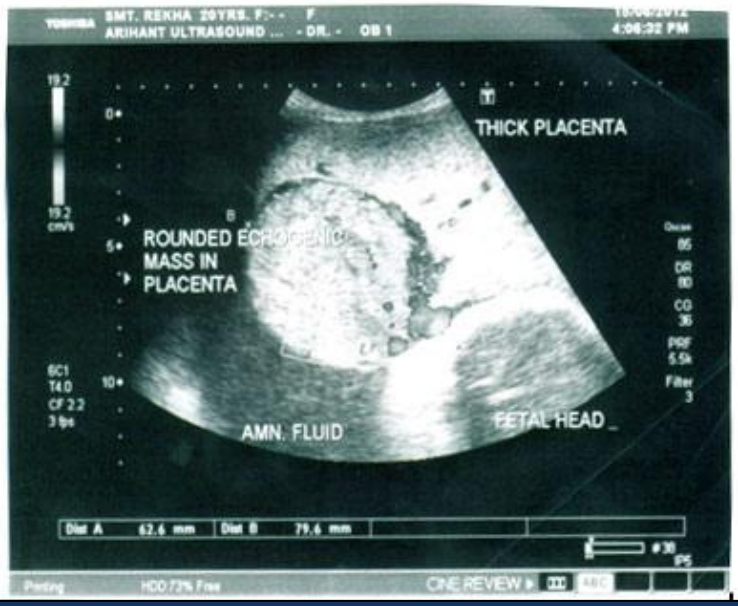

FIGURE 1: Transabdominal USG showing large hypoechoic to echogenic solid mass of about 62 X 75 mm in placenta towards fetal surface.

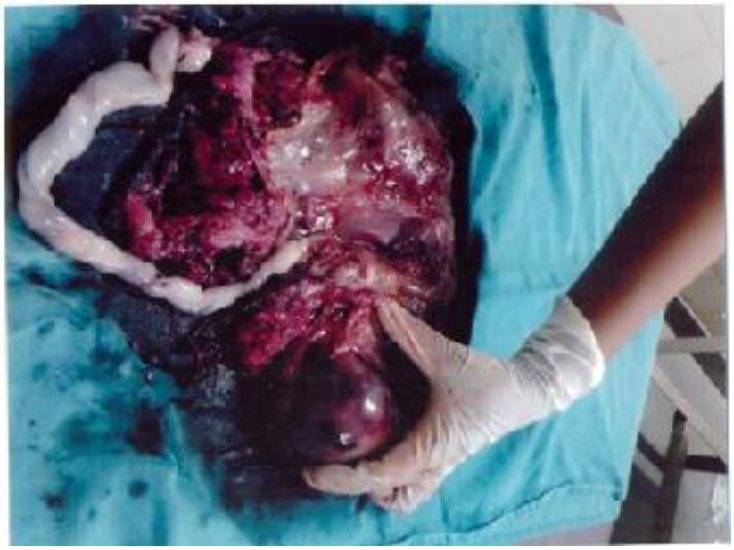

FIGURE 2: A huge vascular tumour of placenta after delivery (held between thumb and index finger)

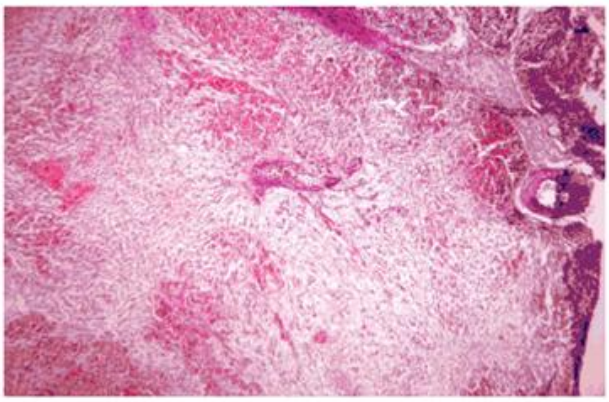

Figure 3 Photomicrograph of chorangioma showing complex network of capillaries

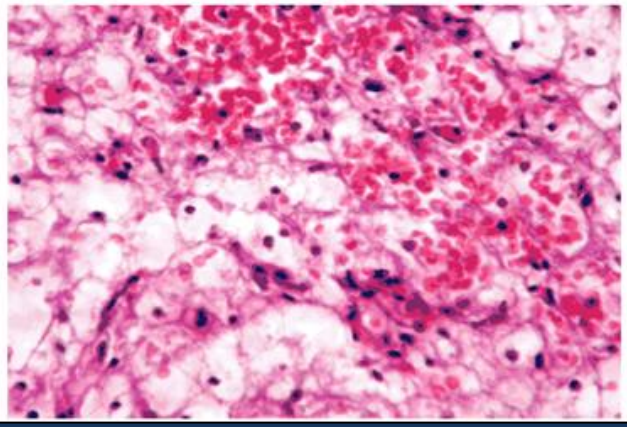

Figure 4 Photomicrograph showing high power view of chorangioma with network

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