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Research Paper | Medical Science

Placental Chorangioma : a Rare Cause of Pre-Eclampsia

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ABSTRACT

Primigravida with full term pregnancy presented as a case of preeclampsia with fetal growth restriction. On investigations she is found to have placental chorangioma measuring approximately 8 x 12 Cms. Further tests of fetal well being ie. NST & Color flow assessment of umbilical artery disclosed the fetal jeopardy. Emergency cesarean section revealed that it was a highly vascular chorangioma of placenta with abnormal vascularity of the placental bed. Prophylactic usage of oxytocics & minimal tissues handling at the uterine closure probably averted PPH .Histopathological assessment of placenta made it clear that it was chorangioma.

KEYWORDS:

Introduction

Chorioangioma is the benign neoplasm of the placenta, consisting of vascular mass arising from chorionic tissue. It is also known as haemangioma.[1,2] Chorioangiomas vary in number and sizes. Smaller ones have no clinical significance and often remain undiagnosed. The prevalence of large tumours is minimal and varies from 1 per 3, 500 to 1 per 16,000 live placenta examined.[3,4] Large chorioangiomas may cause serious complications such as foetal anaemia, hydrops and foetal death.[5,7] Therefore, every effort should be made to diagnose these lesions and their complications as early as possible.[4,6] Chronic placental insufficiency is the commonest cause for fetal growth restriction. Rare placental causes affecting fetal outcome are partial mole, chorioangioma, and placental teratoma. Large chorioangioma has adverse effects on both mother and fetus.

Case Report:

26 yrs primigravida referred to Bharati Hospital as a case of Pre-eclampsia with 37 weeks of pregnancy having IUGR & Oligohydramnios for further management. Patients LMP was 21/03/2012 & she has previous regular cycles. Patient was found to be a case of Pregnancy Induced Hypertension in her second trimester of pregnancy & was on treatment for the same. All her previous reports were normal including ultrasound but her last ANC visit showed IUGR along with Oligohydramnios.

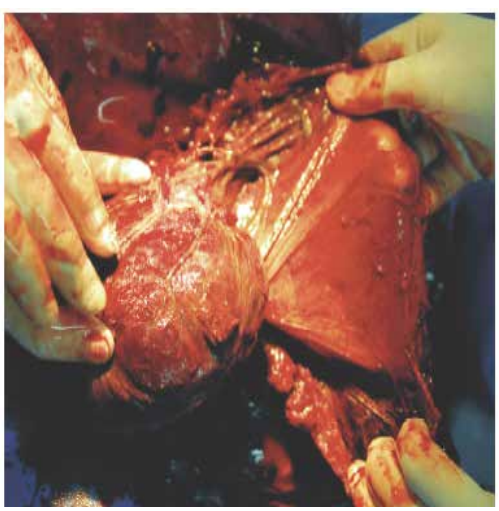
On admission to our hospital , we have further investigated the patient by doing color Doppler. On color Doppler , it showed a large Chorangioma measuring approximately about 8 x 12 Cms with high vasularity.

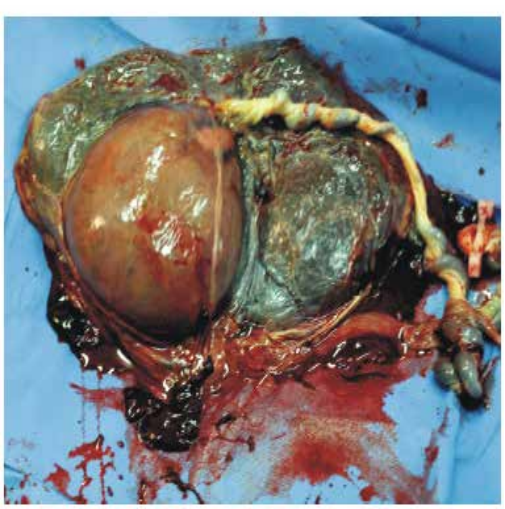
Approximate fetal gestational age was 33-34 wks with fetus weighing 2224 gms . There was e/o reduced diastolic flow in the umbilical arteries along with raised RI & S/D ratios suggestive of fetoplacental insufficiency. MCA flow was normal . AFI was 4 & fetal Biometry clearly depicting IUGR.



(USG Picture showing placental hemangioma.)

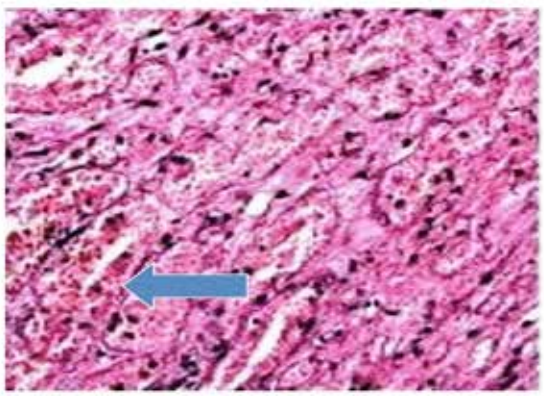
Tests of fetal well being was non-reassuring ie . NST so the patient & her relative counseled for the need of emergency cesarean section. Emergency cesarean section was performed & intraoperativly it was found to be a highly vascular placental charangioma along with abnormal vasularity in the placental bed .Cord was short measuring 16 Cms only . However uterus retracted well & there is no PPH during the case due to the judicious use of oxytocics.





(Chorangioma seen protruding on the dorsal aspect of placenta.)

Placenta was sent for the histopathological investigation & it was found to be a case of placental Chorangioma.



(Histopathological examination showing angiomatous cells.)

Pathogenesis .
Placental chorioangioma is the most common benign tumor of the placenta. The largest retrospective study of 22000 placental examinations showed 138 chorioangioma with an incidence of 0.6% [8]. Chorioangioma is believed to arise by 16th day of fertilization, although there is no documentation of tumor in first trimester [9]. It consists of a benign angioma arising from chorionic tissue. Three histological patterns of chorioangiomas have been described by Marchetti [10] (Figure 3): angiomatous, cellular, and degenerate. The angiomatous is the most common, with numerous small areas of endothelial tissue, capillaries, and blood vessels surrounded by placental stroma. These lesions are sometimes classified as placental hamartomas rather than true neoplasia. [8] There is no malignant potential.

Clinical Features and Complications
Tumors of less than 5 cm are usually asymptomatic and unlikely to cause maternal and fetal complications. Large tumors probably act as arteriovenous shunts and cause complications. Maternal complications are **preeclampsia**, preterm labour, placental abruption, and polyhydramnios. Of the various reported clinical complications, the correlation of chorioangioma with hydramnios and preterm delivery is significant, latter being a sequelae of the hydramnios. Fetal congestive heart failure may develop because of the increased blood flow through the low resistance vascular channels in the chorioangioma acting as an arteriovenous shunt. Other associated complications are hydrops, hemolytic anemia, congenital anomalies, fetal thrombocytopenia, cardiomegaly, and growth restriction.

Ultrasound Diagnosis
Clarke in 1978 described the first case of chorioangioma [11]. Antenatal ultrasound was reported in 1978, and this has made diagnosis and follow up possible before delivery [9]. This also helps in close fetal monitoring and hence timely delivery. Gray-scale findings are well-defined complex echogenic mass different from the rest of placenta and tumor protrudes into amniotic cavity near umbilical cord insertion. Use of Doppler to differentiate from placental teratoma, blood clot, and leiomyoma was first demonstrated by Bromley and Benacerraff [12] . On Doppler, feeding vessel usually has same pulsatile flow as that of umbilical artery but may have arteriovenous shunt causing low resistance flow [13].

Interventions.
Chorioangioma with complications before fetal viability requires interventions. Various techniques with varying success rates have been tried such as serial fetal transfusions [14] fetoscopic laser coagulation of vessels supplying the tumor [15], chemosclerosis with absolute alcohol [16], 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.

Prognostic Factors Large chorioangioma associated with polyhydramnios leads to high perinatal morbidity and mortality. Postpartum hemorrhage is a well-known complication in mother.

Differential Diagnosis
Chorioangioma is often confused with placental teratoma, degenerated myoma, and blood clot. Chorioangioma is differentiated from the rest by demonstration of vascular channels similar to fetal vessels. Echo pattern of blood clot differs with time, while chorioangioma remains same. Partial mole has diffuse pattern and myoma is seen in maternal surface. [9]

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