

Rare case of giant chorioangioma and review of literature

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ABSTRACT

Placental tumours are classified into trophoblastic and nontrophoblastic tumours. Nontrophoblastic tumours are relatively rare which includes chorioangioma/placental hemangioma, placental teratoma, placental metastasis. Chorioangioma has a prevalence of 1% among other placental tumours. Giant chorioangioma is relatively rare. Chorioangioma may be associated with adverse fetal and maternal complications. Fetal complications may include intrauterine fetal growth retardation, fetal anemia, polyhydramnios and maternal complications may include pregnancy induced hypertension, antepartum hemorrhage, preterm labour. Untoward complications can be avoided by timely detection, appropriate follow up and management. We report a case of giant chorioangioma and its outcome.

Keywords: Placental tumours, Chorioangioma, intrauterine fetal growth retardation.

Introduction

Placental tumours can be broadly classified into two types - trophoblastic and nontrophoblastic. Nontrophoblastic tumours are relatively rare which includes placental chorioangioma/hemangioma, placental teratoma, placental metastasis. Chorioangioma has a prevalence of 1% among other placental tumours¹. There are very few case reports of giant chorioangioma. Giant chorioangioma may cause adverse fetal and maternal complications². Fetal complications may include intrauterine fetal growth retardation, fetal anemia, polyhydramnios and maternal complications includes pregnancy induced hypertension, preeclampsia, antepartum hemorrhage and preterm labour.

Case History

Case: We report a case of 25 year old primigravida in her third trimester at 35 weeks of gestation, referred to our department for obstetric ultrasound from gynecology department. Ultrasound scan revealed single live intrauterine gestation with cephalic presentation of biparietal diameter-, abdominal

Circumference-, femur length-, average gestational age and fetal weight-. Placenta was anterior and liquor adequate. Three vessel cords was demonstrated. On grey scale there was e/o 3.5 x 2.5 x 4 cm sized well defined hypoechoic lesion noted at cord insertion site [Figure 1] which on colour doppler showed peripheral vascularity [Figure 2]. Patient's temperature, pulse and blood pressure were within normal limit. Patient was followed up to 37 weeks of gestation at which she went into labour and gave birth to male baby by normal vaginal delivery. Baby weight was 3kg and cried immediately after birth. Macroscopically placenta measured 12 x 15 x 7 cm weighing around 1085gms. There was protruding lesion noted near cord insertion site. On histopathology shows diffuse proliferation of capillary sized vessel [Figure 3,4].

Discussion

Chorioangioma is relatively rare benign tumour of placenta with a prevalence of 1% among other placental tumours¹. Most chorioangiomas are small and are found incidentally at obstetric ultrasound. Chorioangioma originates from primitive chorionic mesenchyme. It develops when blood vessels and stroma proliferate independently of the surrounding tissue. Histopathologically chorioangioma is further divided into three types- angiomatous, cellular and degenerate^{2, 3, 4}. The angiomatous pattern is most common characterised by abundant capillaries and blood vessels surrounded

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by placental stroma. The cellular pattern has abundant endothelial cells within stroma. The degenerate pattern is characterized by calcification, necrosis or hyalinisation. Most authors consider chorioangioma as neoplasms, however these lesions are also classified as placental hamartomas by few^{5,6}.

Chorioangioma may have clinical implications depending upon their size and vascularity. Giant chorioangioma (>4cms) are rare. They are associated with increased maternal age, diabetes mellitus and hypertension. Maternal complications may include pregnancy induced hypertension, preterm labour, antepartum hemorrhage and polyhydramnios. Of the various complications preeclampsia and polyhydramnios have increased association. Fetal complications may include fetal congestive heart failure, intrauterine growth restriction, anemia, fetal thrombocytopenia and hydrops. Most cases of chorioangioma are diagnosed following delivery. Clark described the first case of chorioangioma in 1978⁷ and first ultrasound diagnosis was also reported in the same period which made diagnosis and follow up possible

following delivery. Use of Doppler for differentiating chorioangioma from other lesions like hemorrhage, teratoma was first stated by Bromley and Benacerraf⁸. However, increased alpha-fetoprotein or Beta hCG may cause suspicion⁹. Colour Doppler imaging helps differentiate chorioangioma from other lesions like fibroid, teratoma, hematoma but is useful in prenatal follow-up of these cases¹⁰. Eldar-Geva et al¹¹ et al showed calcifications and tumour size reduction leads to improvement in clinical outcome.

Placental chorioangioma can increase in size rapidly, leading to fetal heart failure, motoring and follow up Doppler is of paramount importance. We have shown the importance of sonography and Doppler study for diagnosis and follow up of placental chorioangioma. Larger chorioangiomas specially those more than 4cm may have bad prognosis hence early diagnosis and prompt follow up of pregnancies are necessary with ugrey scale and Doppler ultrasound studies. Giant chorioangioma is associated with adverse fetal outcomes which warrents timely detection, close follow up and institutional delivery as in our patient.



Figure 1: Ultrasound Grey scale image shows well defined hypoechoic lesion at cord insertion site.



Figure 2: Power doppler image shows well defined hypoechoic lesion at cord insertion site with peripheral vascularity.

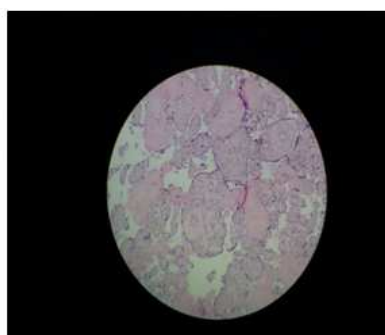


Figure 3: H and E stain (Low magnification): shows placental cotyledons with diffuse proliferation of capillary sized vessels.

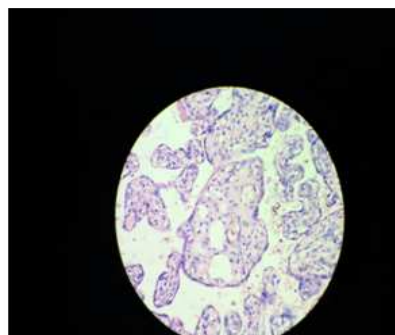


Figure 4: H and E stain (High magnification): shows placental cotyledons with diffuse proliferation of capillary sized vessels.

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