

Placental Giant Chorangioma: A Rare Case Report with Favorable Outcome

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Abstract

Chorangiomas are benign non trophoblastic vascular neoplasm arising from primitive chorionic mesenchyme. It is the most frequent placental tumor occurring in 1% of pregnancies. Giant chorangioma(>5 cms) exemplifies adverse fetal and maternal outcomes. Chorangiomas need to be differentiated from chorangiosis, chorangiomatosis, inflammatory myofibroblastic tumor, leiomyomas, placental infarcts and chorangiocarcinomas. USG is the gold standard for diagnosis of chorangioma. Color Doppler is beneficial in differentiation of chorangioma from degenerated uterine leiomyoma or associated other placental tumors. Therapeutic interventions of chorangioma is controversial like draining excessive amniotic fluid or surgical intervention like laser coagulation and interstitial laser therapy. All placentas need to be examined histopathologically for confirmation of diagnosis and to differentiate from other tumors.

Keywords: Chorangioma, trophoblast, USG, Color Doppler.

Introduction

Chorangioma also known as placental hemangioma simulates a hamartoma represents as hypoxia induced reactive process. These are benign non trophoblastic vascular neoplasm arising from primitive chorionic mesenchyme. In 1798 John Clarke reported it as the most frequent placental tumor occurring in 1% of pregnancies associated with advanced maternal age, DM, HTN, preeclampsia, multiple gestations or high altitude pregnancy.¹ Majority of chorangiomas are miniature sized, asymptomatic and incidentally discovered. Giant chorangioma(>5 cms) exemplifies adverse fetal and maternal outcomes and is associated with IUGR, polyhydramnios, preterm labour, AV shunts, fetal thrombocytopenia and mirror syndrome.²

Case Report:

A 32 yrs old Gravida₂ Para₁ woman with previous normal vaginal delivery was referred to Obstetrics and Gynecology department of our hospital from peripheral rural hospital with placental mass. She had an uneventful prenatal period until the diagnosis of a placental mass at 34 weeks gestation on USG. She had no other complaints. USG showed a single live fetus with normal cardiac activity, placenta was anterior and the lower margin of placenta was away from the internal os. There was a 7.8x7 cms hypoechoic intraplacental mass with few anechoic areas near the site of cord insertion. There was evidence of polyhydramnios.

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Fig 1: USG showing hypoechoic intraplacental mass

The patient was kept under observation and elective LSCS was done at 37.1 weeks in view of oblique lie and large placenta. A healthy baby was born with APGAR score of 8/10 and birth weight of 3.218 kg. Complete evacuation of placenta and membranes were done and sent for histopathology. The placenta weighed 1260 gms and measured 20x16x3.5 cms. A three vesseled umbilical cord measuring 20x2.5 cms in length and false knots was noted. The umbilical cord insertion was eccentric. A single 8x7x3.5 cms spherical solid mass was extending from maternal and fetal surface. Cut section showed a fleshy firm mass with few cystic spaces near the insertion of the cord.

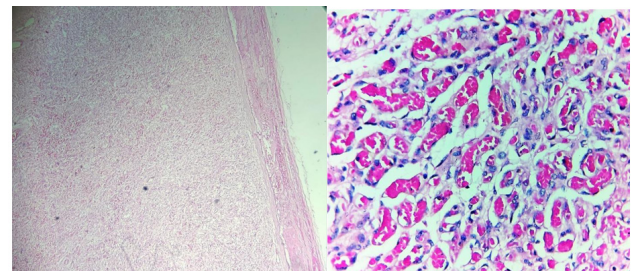


Fig 2 a: A 8x7x3.5 cms spherical solid mass extending from maternal surface



Fig 2.b: Cut section showed a fleshy firm mass with few cystic spaces near the insertion of the cord.

Microscopic examination revealed tumor mass comprising of proliferating capillaries and dilated blood vessels with intervillous fibrin. Histological examination was consistent with chorangioma.



Microscopic examination revealed tumor mass comprising of proliferating capillaries and dilated blood vessels with intervillous fibrin.

Discussion

Chorangioma is a frequently discerned benign, non trophoblastic vascular neoplasm arising from the placenta. They are additionally designated as placental hemangioma or fibroangiomyxoma. Chorangioma is associated with adverse fetal outcomes. Majority of small chorangiomas are incidentally discovered and are asymptomatic and are of minimal clinical significance. Giant chorangioma is an infrequent placental neoplasm exceeding >5 cm.

They are associated with maternal complications such as polyhydramnios, cervical incompetence, preterm labour, increased proportion of LSCS, abruptio placenta, fetal malformations, PPH and fetal complications like growth retardation, haemolytic anemia, thrombocytopenia, non immune hydrops fetalis, fetal cardiac failure, cerebral embolism, cerebral infarct and can also cause intrauterine death. There are no evidence of chromosomal aberration.^{3,4,5} This case had only polyhydramnios and LSCS was indicated due to oblique lie. There were no maternal or fetal complications.

USG is the gold standard for diagnosis of chorangioma. These neoplasms appear as well circumscribed echogenic masses separated from the rest of the placenta. They protrude within the amniotic cavity near the insertion of the cord. Color Doppler is beneficial in differentiation of chorangioma from degenerated uterine leiomyoma or associated other placental tumors. The chorangiomas appear extremely vascular well circumscribed tumors. Chorangiomas diagnosed prior to placental viability needs laser coagulation of feeder blood vessels, sclerosis of vessels with alcohol, intrauterine fetal blood transfusion and devascularisation.⁶ Histologically 3 patterns are described: angiomatous, cellular and degenerated. Angiomatous is the most common and is composed of numerous blood vessels with foci of infarction, hyalinisation, calcification and fibrosis may be seen. Malignant transformation is not seen.⁷ Our case showed predominant angiomatous pattern with areas of infarction.

Chorangiomas need to be differentiated from chorangiosis and chrangiomatosis which is devoid of distinct tumor formation.^{8,9} Inflammatory myofibroblastic tumor which is a circumscribed neoplasm situated on the placental membrane or basal plate of placenta. The neoplasm is variably cellular composed of proliferation of spindle shaped cells in myxoid stroma with inflammatory cells. Leiomyoma is a benign well circumscribed neoplasm situated upon the basal plate of placenta and has a whorled fascicle of smooth muscle. They may display hyaline degeneration with calcification, cystic change. Placental infarcts are situated at periphery of placenta and are poorly circumscribed irregular masses. Chorangiocarcinoma is an extremely rare malignant

neoplasm characterised by extensive trophoblastic cell proliferation, necrosis, cellular and nuclear atypia. They may arise in a chorangioma or maybe composed of chorangioma and chorangiocarcinoma.

Therapeutic interventions of chorangioma is controversial like draining excessive amniotic fluid or surgical intervention like laser coagulation and interstitial laser therapy to decimate a chorangioma can be advantageously adopted.¹⁰ Giant Chorangioma associated with polyhydramnios is amenable to therapeutic amniocentesis. However our case is an uncommon presentation of giant chorangioma in which large size chorangioma with polyhydramnios was not related to any developmental anomaly. It is consistent with the hypothesis that the remaining placental tissue compensates the fetal requirement.¹¹

Conclusion

Chorangioma arises from abnormal proliferation of vessels in chorionic tissue. They have to be differentiated from other placental neoplasms. Chorangiomas may lead to potentially serious prenatal and pregnancy outcomes. Regular monitoring by USG and Doppler can pick up early complications. It is essential to rule out placental factors in cases of polyhydramnios. All placentas need to be examined histopathologically for confirmation of diagnosis and to differentiate from other tumors.

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Conflict of Interest: Nil.

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