

Case Report

Chorioangioma of the Placenta with Hydrops Foetalis

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Abstract

Chorioangioma, the non trophoblastic tumour, constitutes the commonest benign growth of the placenta. Though benign, 30% rate of maternal or foetal complications are associated with large masses. Sonography including colour Doppler imaging provides the best modality not only for its diagnosis but also the foetal status. A case of large placental chorioangioma has been reported here resulting in dismal foetal outcome diagnosed on antenatal ultrasound.

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 small, 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}

Case Report

A primigravida, an unbooked case presented in emergency at 31 weeks with complaints of decreased foetal movements for 15 days. On clinical examination height of fundus was 30 weeks with no foetal heart sounds. The rest of the clinical examination was normal. She was referred for ultrasound. Her ultrasound on grey scale imaging revealed single foetus with absent foetal heart and movement. Foetal growth parameters were of 28 weeks of gestation and signs of hydrops foetalis including scalp and body wall oedema, pleural, pericardial effusion and ascites were noted. Placenta was located anteriorly with a well circumscribed hypoechoic mass seen arising from the lower end of the foetal surface. It measured approximately 10.3x8.1 x7.8 cm in antero-posterior, transverse and craniocaudal directions (Figure) Colour Doppler imaging revealed abundant flow in placental mass which was both arterial and venous type, predominantly venous at the periphery. Rest of the placenta showed normal morphological appearance.

Patient was shifted to the labour room. After induction of labour patient delivered a male child by spontaneous vaginal delivery showing features of hydrops foetalis. Manual removal of mass and placenta was performed easily and placenta was sent for histopathological examination. Recovery of the patient was uneventful. She was discharged from hospital after two days.

On gross examination, the placenta showed a large mass, firm in consistency with a red colour surface on cut section.

Microscopic examination revealed a well circumscribed benign mass, composed of closely packed vascular spaces lined by endothelial cells. These vascular spaces contained blood. Stroma showed hyalinization and fibrosis. Histological features were consistent with Placental Chorioangioma.

Discussion

Chorioangioma is the commonest benign neoplasm of the placenta having an incidence of 1% on pathological examination. Smaller intraplacental tumours are usually asymptomatic while larger ones, more than 5 cm are associated with foetal and maternal



Figure: Placenta anterior in location. Large hypoechoic mass arising from its anterior margin.

complications. Major maternal risks include polyhydramnios, preterm delivery, abruptio placentae and placenta previa.

Primary foetal risks are nonimmune hydrops foetalis, congestive cardiac failure, thrombocytopenia,

preterm and growth restriction.^{5,6} Intrauterine or neonatal death results due to severe foetal distress caused by left to right shunting of blood across the tumour; the tumour acting as a physiological dead space thereby returning the oxygen depleted blood to the foetus. Microangiopathic haemolytic anaemia caused by mechanical injury to the foetal red cells as they traverse the labyrinthine newly formed deformed vascular channels may be an associated feature.⁷

An antenatal diagnosis of placental chorioangiomas especially a large one with clinical significance is possible by ultrasonography.⁸ Grey scale imaging demonstrated hypoechoic well circumscribed mass in placenta on foetal surface. Colour Doppler imaging acts as an additional tool by demonstrating specific features such as presence of large single feeding vessel with branching pattern as shown by Afzal et al.⁹ Some studies showed only venous flow while few studies have also shown both arterial and venous flow as in the presented case.

Colour Doppler imaging also contributed greatly in the differential diagnosis of these masses from other placental pathologies such as haematoma, degenerating fibroid, a placental teratoma, and an incomplete hydatidiform mole,^{7,8} as shown by Zalel et al.

Ultrasound is not only diagnostic but is also used to assess and serially monitor the foetus in an effort to detect sign of volume overload with decompensation or hydrops.

Conclusion

Large placental chorioangiomas are associated with poor prognosis. Ultrasound including colour doppler imaging provide the mainstay for its diagnosis, foetal monitoring and appropriate antenatal management.

References

1. Sabhikhi AK, Chaudhury MC, Singh D, Raja LN. Chorangioma of the placenta with hydrops Fetalis. *Indian pediatr* 1996; 33:520-1.
2. Haak MC, Oosterhof H, Mouw RJ, Oepkes D, Vandenbussche FP. Pathophysiology and treatment of fetal anemia due to placental chorioangioma. *Ultrasound in Obstet Gynecol* 1999; 14:68-70.

3. Mesia AF, Mo P, Ylagan LR. Atypical cellular chorangioma. *Arch Pathol Lab Med* 1999; 123: 536-8.
4. Asadourian LA, Taylor HB. Clinical significance of placental haemangioma. *Obstet Gynecol* 1968; 31:551-5.
5. Zabka TS, Papendick RE, Benirschke K. Placental Tumor from an East African bongo (*Eurycerus isaaci*) fetus. *Vet Pathol* 2006; 43: 785-9.
6. Chen CP, Chern SR, Wang TY, Huang ZD, Huang MC, Chuang CY. Pregnancy with concomitant chorangioma and placental vascular malformation with mesenchymal hyperplasia. *Human Reprod* 1997; 12: 2553-6.
7. Zalel Y, Weisz B, Gamzu R, Schiff E, Shalmon B, Achiron R. Chorioangiomas of the Placenta: sonographic and Doppler Flow Characteristics. *J Ultrasound Med* 2002; 21: 909-13.
8. Wallenburg HC. Chorioangioma of the placenta. Thirteen new cases and a review of the literature from 1939 to 1970 with special reference to the clinical complications. *Obstet Gynecol Surv* 1971; 26: 411-25.
9. Afzal M, Haq TU, Husen YA. Chorangioma: Diagnosis by colour Doppler Ultrasound. *JCPSP* 1998; 9: 195-6.