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Case Report

Pathology Section

Giant Placental Chorangioma: A Rare Case Report

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ABSTRACT

Chorangioma is a nontrophoblastic benign vascular tumour of the placenta, arising from the primitive chorionic mesenchyme. The clinical significance is related to the size of the tumours. Small chorangiomas, with a frequency of about 1%, are often asymptomatic. On the contrary, giant chorangiomas, greater than 5 cm in diameter, are rare tumours, with prevalence ranging from 1:9,000 to 1:50,000, and often associated with a variety of pregnancy complications and a poor perinatal outcome. We report a case of 26-year-old female who presented to us at 36 weeks of gestation with pain in the lower abdomen. Ultrasonograpy revealed polyhydramnios and a vascular tumour on the surface of placenta. Proper conservative antenatal management was done and a full term healthy baby was delievered. Histopathological examination of the extracted mass confirmed the diagnosis of chorangioma. The novelty of this report lies in the presence of large nontrophoblastic vascular placental tumour and the absence of any fetal complications. We emphasise the need of regular and timely antenatal management to diagnose and treat the complications of chorangioma at an early stage.

Keywords: Nontrophoblastic, Polyhydramnios, Vascular tumour, Ultrasonography

CASE REPORT

A 26-year-old second gravida presented in gynaecological outpatient department, at 36 weeks of gestation with complaint of pain in the lower abdomen for 3 days. The pregnancy had been uneventful and the fetal sonograms were reported as normal before this time.

Ultrasonography performed at 36th week, revealed polyhydramnios and a well defined echogenic mass having echogenecity different from the rest of the placenta [Table/Fig-1], near the vicinity of umbilical cord insertion.

On colour doppler imaging, a central feeding vessel was seen, and on pulsed doppler it showed pulsatile flow at a rate similar to that of umbilical artery.

Elective lower segment ceasarean section was done at 37 weeks of gestation and a healthy baby with normal Apgar score and birth weight of 2.82 kilograms was delivered. Placenta was extracted out completely with membranes and sent for histopathology.

Macroscopically, the placenta was 16x13x7cm and weighed 980 grams. A large, bulbous mass measuring 8x7x6.5cm was present on the fetal surface of the placenta, at the site of cord insertion [Table/Fig-2]. The mass had soft and dark, red-tan cut surface [Table/Fig-3].

Microscopic examination of the mass confirmed the angiomatous pattern of chorangioma. It showed numerous proliferative thin walled capillaries lined by flattened endothelium and separated by fibrous stroma [Table/Fig-4]. This was further confirmed by IHC for CD34, which showed strong reactivity of endothelial cells [Table/Fig-5].

Both the mother and the baby were discharged in good condition following delivery.

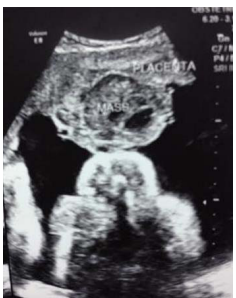
DISCUSSION

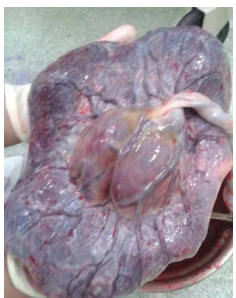
Chorangioma frequently referred to as placental haemangioma is a nontrophoblastic, biologically indolent neoplasm, characterized by the abnormal proliferation of vessels arising from chorionic tissue. They are often found in association with elderly primipara, twin pregnancies, hypertension and diabetes [1].

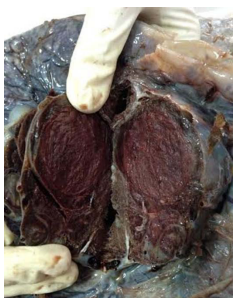
Prenatal diagnosis of chorangioma can be made by ultrasonography. The typical appearance is of a vascularised tumour, differentiated from other lesions like placental haematoma, degenerating fibroid, placental teratoma and deceased twin by colour Doppler. MRI can also aid in diagnosis as T2 images of MRI will be similar to haemangioma [2].

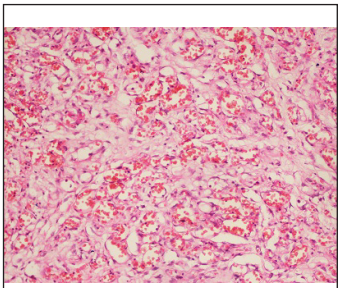
Chorangiomas are usually found on the fetal surface of the placenta, often in the vicinity of umbilical cord insertion [3]. Grossly they are well-circumscribed, purplish red tumours with fleshy, congested, red to tan cut surface.

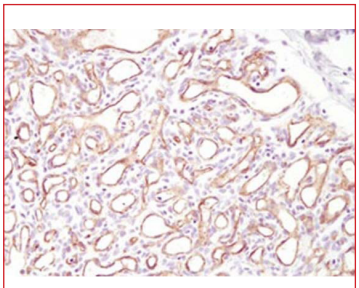
Microscopically, three histological patterns have been described: angiomatous, cellular and degenerate. The angiomatous is the most common, composed of numerous proliferative blood vessels in various stages of differentiation, from capillary to cavernous, surrounded by placental stroma. Immunohistochemicaly, the tumour cells show staining for CD31, CD34, factor VIII, GLUT1 and cytokeratin 18, a finding that suggests origin from blood vessels of the chorionic plate and anchoring villi [4].











[Table/Fig-1]: Ultrasonography showing a well defined echogenic mass having echogenecity different from the rest of the placenta. **[Table/Fig-2]:** A large, bulbous, hypervascularised mass present on the fetal surface of the placenta, at the site of cord insertion. **[Table/Fig-3]:** Dark, red-tan cut surface of chorangioma. **[Table/Fig-4]:** Microscopic examination of the tumour mass showing numerous proliferative thin walled capillaries separated by fibrous stroma (H&E, × 200). **[Table/Fig-5]:** IHC for CD34 showing strong immunoreactivity of endothelial cells. (Immunoperoxidase x200).

Differential diagnosis of chorangioma includes chorangiosis and chorangiomatosis, that presents as diffuse or more often a focal proliferation of villous angioblastema with villi that are not present in chorangioma. Another rarer differential is chorangioma with trophoblast proliferation ("chorangiocarcinoma," a probable misnomer), a rare proliferation of trophoblastic tissue seen in the vicinity of otherwise benign chorangioma [5].

Small chorioangiomas (less than 5 cm in diameter) are thought to be inconsequential. Large placental chorangioma may cause a variety of complications such as polyhydramnios, premature delivery, premature placental separation and placenta previa [6]. Arteriovenous shunts in large chorioangiomas can impair the fetal circulation by increasing the venous return to the heart, causing tachycardia, cardiomegaly and hypervolaemia [7]. As a result, there is the possibility of high output cardiac failure, oedema, hydrops, stillbirth and intrauterine growth retardation [8]. Anaemia, thrombocytopaenia, congenital anomalies or congestive cardiac failure may be seen in a neonate.

Large chorangioma associated with polyhydramnios leads to high perinatal morbidity and mortality [9,10]. However, in our case there was successful outcome with conservative management inspite of the large tumour size and association with polyhydramnios.

Treatment modalities of chorangioma include endoscopic surgical devascularization, alcoholic ablation and interstitial laser coagulation [11].

The presented case is one of the uncommon presentations of chorangioma, in which its presence, size and association with polyhydramnios is not related to any developmental anomaly of the fetus. Our hypothesis is that the remained placental tissue compensated fetal requests.

CONCLUSION

Placental chorangioma is a rare tumour, which represents a challenge with its potentially serious complications adversely affecting pregnancy outcome. However, regular monitoring by serial ultrasound, doppler waveform surveillance and fetal echocardiography is recommended to pick up complications early so that they can be dealt effectively.

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