

CHORANGIOMA- A RARE CAUSE FOR POLYHYDRAMNIOS AND FOETAL DISTRESSRigith Babu Paul¹, Ashima², Roma Isaacs³¹Postgraduate Resident, Department of Pathology, Christian Medical College and Hospital, Ludhiana.²Assistant Professor, Department of Pathology, Christian Medical College and Hospital, Ludhiana.³Professor, Department of Pathology, Christian Medical College and Hospital, Ludhiana.**HOW TO CITE THIS ARTICLE:** Paul RB, Ashima, Isaacs R. Chorangioma- a rare cause for polyhydramnios and foetal distress. J. Evolution Med. Dent. Sci. 2018;7(07):939-941, DOI: 10.14260/jemds/2018/214**PRESENTATION OF CASE**

The following case report is of a female patient, G₂P₁L₁ with gestational diabetes mellitus, polyhydramnios and foetal distress. She was taken up for caesarean section and delivered a neonate with no anomalies. Placenta was enlarged and showed a large nodule on foetal surface.

Differential diagnoses were placental lesions like placental teratoma, incomplete or partial hydatidiform mole, haematoma, villous capillary lesions and chorangioma.^{1,2,3}

The placenta delivered was sent for histopathological examination (HPE) with clinical diagnosis of chorangioma.

On gross inspection, the placenta measured 15x11x6 cms along with a large, soft to firm, solitary, well circumscribed, bulging, ovoid, nodular mass measuring 11.5x7x6 cms, superficial to the placental disc on the foetal surface and weighing 982 gms (Figure-I). The attached umbilical cord measured 14 cm in length and was eccentrically inserted 6 cm from nearest margin. The placenta had complete membranes and maternal surface showed complete cotyledons. Serial cut sections through the placenta showed small areas of infarction and the mass showed soft, greyish brown to dark, red-tan solid areas along with greyish-white necrotic areas (Figure-II).

Microscopy of the nodular mass showed a tumour well demarcated from the surrounding placental parenchyma located under the chorionic plate. The tumour was comprised of abundant vascular channels- mainly small capillary sized, closely placed congested vessels lined by bland endothelium. Few vessels were large sized and showed intravascular thrombi. The stroma surrounding the capillaries was inconspicuous, loose, showed focal hyalinisation, myxoid change and areas of haemorrhagic necrosis. Mitosis and atypia were insignificant (Figure-III). Histopathological examination of the placenta showed small sized terminal villi with focal crowding, abundant intervillous fibrinous exudates and spotty areas of coagulative necrosis indicating placental infarction. The membranes showed oedema, while the umbilical cord showed two arteries and one vein with arterialisations of vein.

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**PATHOLOGICAL DISCUSSION**

Placental neoplastic diseases are classified as trophoblastic and non-trophoblastic diseases (NTD).⁴ NTD are common, of which chorangioma is the most common benign growth of placenta characterised by abnormal vascular development.⁴ Chorangioma, first described by John Clarke in 1798⁵ occurs in 0.5% - 1% of all placentas.^{1,4,6,7} It usually arises as a single tumour, but less commonly as multiple nodules arising from chorionic tissue of placenta in the third trimester of pregnancy.^{1,6,7} Most are less than 5 cm, have no clinical importance and do not complicate pregnancy.^{1,2,7} Large sized chorangiomas are associated with varied complications in the form of polyhydramnios and intrauterine foetal hypoxia,^{1,7,8} as also seen in our case.

The placenta in our patient also showed a single, large, discrete nodule, well demarcated from the adjoining placental parenchyma.

Based on Histological Features, Chorangioma is classified by Marchetti into Three Types⁹

1. **Cellular Type:** Immature and contains mostly cellular elements packed compactly.
2. **Angiomatous Type:** Most common type. It is distinguished by the presence of numerous small blood vessels.
3. **Degenerative Type:** Mature type with degenerative changes like calcification, necrosis and hyalinisation.

Chorangioma has a benign nature with no malignant potential.⁴ If the mitotic count is more than 7 per 10 high-power fields, associated with cytologic atypia and necrosis, it is termed as atypical chorangioma.¹⁰

The differential diagnosis of lesions like placental teratoma, incomplete or partial hydatidiform mole and nonvascular lesions- haematoma can be easily confirmed by HPE.^{1,2,3}

Other villous capillary lesions include chorangiosis, chorangiomatosis and chorangiocarcinoma.^{2,3}

Chorangiosis consists of diffuse increase in number of vascular channels per villus, more than 10 capillaries, in at least 10 terminal villi, in 3 low-power fields of placenta.^{2,3,11} Chorangiomatosis does not form discrete masses or have thick walled vessels unlike chorangioma.^{2,3} Chorangiocarcinoma comprises of chorangioma with trophoblastic proliferation and marked atypia.^{2,3}

Uterine lesions such as submucosal or degenerated leiomyoma due to its close proximity to the uterine cavity can be confused with chorangioma clinically and confirmed by HPE.^{12,13}

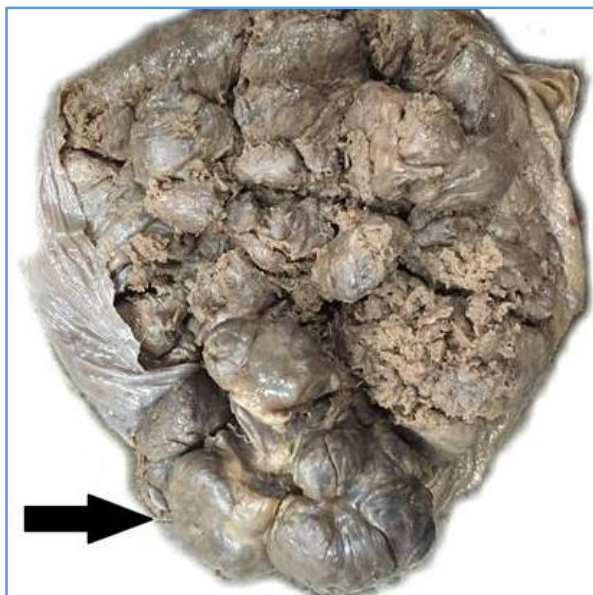


Figure 1. Placenta measured 15 x 11 x 6 cms along with a Large, Soft to Firm, Solitary, Well Circumscribed, Bulging, Ovoid, Nodular Mass measuring 11.5 x 7 x 6 cms

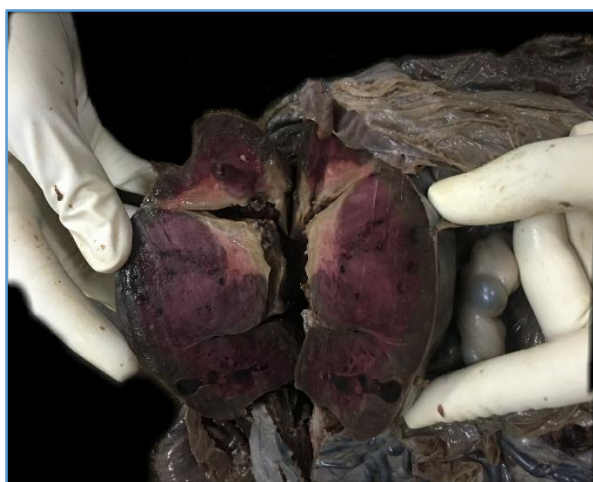


Figure 2. Cut Section through the Mass showed Soft, Greyish Brown to Dark, Red-Tan Solid Areas along with Greyish White Necrotic Areas

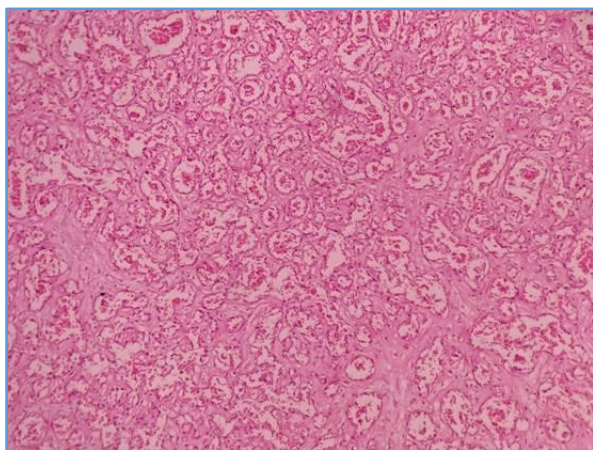


Figure 3. [H and E- 100X]: Abundant Small Capillary Sized, closely placed Congested Vessels Lined by Bland Endothelium. The Stroma surrounding the Capillaries was Inconspicuous and Loose. Mitosis and Atypia were Insignificant

DISCUSSION OF MANAGEMENT

Large sized chorangiomas give rise to maternal, foetal and neonatal complications.^{1,2,7,8,14} The maternal complications are polyhydramnios, preeclampsia, antepartum haemorrhage, postpartum haemorrhage, premature rupture of membrane and obstructed labour.^{2,14}

Chorangioma should be considered as a cause for such conditions. Polyhydramnios is treated with amniocentesis and maternal indomethacin therapy.^{2,14}

The foetal complications can range from mild-to-severe anaemia, thrombocytopenia, cardiomegaly, hepatomegaly, disseminated intravascular coagulation, hydrops foetalis, growth retardation and various other congenital anomalies.^{1,7,8,14}

Our patient also presented with polyhydramnios and foetal distress, so was delivered promptly by caesarean section.

The placental complications are circumvallate placenta, velamentous insertion of cord, placenta previa and abruptio placenta.^{1,4,7,14} The placenta in this case showed eccentric cord insertion.

The interventions performed when chorangioma is diagnosed in-utero by sonography are foetal transfusions, foetoscopic laser coagulation of vessels supplying the tumour, chemosclerosis with absolute alcohol and endoscopic surgical devascularisation.^{4,14} Acceleration of foetal lung maturity is brought about by steroid administration.^{4,14}

The final diagnosis was a large sized chorangioma associated with pregnancy disorder and foetal distress, however, unrelated with neonatal anomaly.

A close antenatal surveillance is warranted for early diagnosis to prevent complications, carry out appropriate intervention and timely delivery.

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