

Tumor of Placenta- Villous Origin- Chorioangioma: Rare Case Diagnosed by Histopathology

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Abstract

Case Report

Chorioangioma is a benign placental tumor. Grossly, they are well circumscribed and purplish red in color. Microscopically, they are composed of a network of proliferating capillaries. Small hemangiomas are asymptomatic, but larger ones (>5cm) are rare and occurs in 1:9000-1:50000 pregnancies. A 28year old female with 7 months of amenorrhea, presented with complains of sudden onset of pain in abdomen and bleeding per vagina. On examination her vitals were normal. Her blood reports were normal. She delivered an anomalous baby who dies soon after birth. On histopathological examination of placenta "TUMOR OF PLACENTA -VILLOUS ORIGIN-CHORIOANGIOMA" was diagnosed.

Keywords: Chorionic villi, trophoblastic cells and chorioangioma.

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INTRODUCTION

Chorioangioma is the most common benign vascular tumor of placenta. It is seen in approximately 0.5-1% of all placentas examined at terms [1, 2]. Most of them are small, often asymptomatic and of no clinical significance. It goes undetected without proper examination of the placenta. Large chorioangioma is rare tumors, measuring more than 5 cm in size. They are more common in multiple gestations and are typically found on the chorionic surface [2]. Large chorioangioma is associated with complications that can affect the mother, fetus, or neonate. Large chorioangiomas, which must be perfused by the fetal circulation, can result in cardiac failure, hydrops, or even demise. The list of other associations includes disseminated intravascular coagulation (fetal), anemia, fetomaternal hemorrhage, abruption, and IUGR [2]. It is associated with hydramnios, premature delivery, and placenta previa. These manifestations may result in severe fetal distress, anomalies and intrauterine death.

We report a case of 28-year old female-primigravida, with complains of sudden onset of pain in abdomen and bleeding per vagina. She delivered a female child through vaginal delivery who died within an hour. The placenta of the patient was sent for the histopathological examination.

CASE REPORT

A 28 year old female with 7 months of amenorrhea, without any previous illness, presented with complain of sudden onset of pain in abdomen and bleeding through vagina. On examination she was afebrile, with a blood pressure of 124/78 mmHg. Her heart rate was 86 beats per minute, respiratory rate was 20 breaths per minute and arterial oxygen saturation on room air was 98%. Her blood reports were normal.

Ultrasonography (USG) of the abdomen and pelvis was reported reveal well differentiated heterogeneously hyperechoic lesion with internal hypoechoic areas measuring 10.9x12.4x11.2 cm near fundal part of placenta with internal vascularity most likely suggestive of chorioangioma. At 28 weeks of gestation, the patient delivered a female baby through vaginal delivery. The neonate born with anomalies. In spite of giving all the supportive management available at the institute, the neonate died within an hour of birth. Mother's placenta was sent for histopathological examination.

After receiving the specimen, it was fixed in formalin, gross examination done. 28x12x5 cm size placenta was received. Maternal surface was greyish white to brown in colour, soft to firm and friable in consistency. Fetal surface was covered with amniotic

sac. On fetal surface 14 cm long umbilical cord was attached. Open separate brownish colour 7x7 cm size placental part was also received (Figure-1).

Section were taken from both maternal and fetal surface of placenta, Tissue processing done, paraffin wax blocks were made, blocks were cut by microtome and stained with hematoxyline and eosine.

H&E stained section shows lining of chorionic villi with trophoblastic cells. In the stroma of villi, there is proliferation of plenty of capillaries, many of them are filled with blood and many are showing endothelial cell proliferation. Findings are in favour of " TUMOR OF PLACENTA -VILLOUS ORIGIN - CHORIOANGIOMA" (Figure-2).



Fig-1: Gross appearance of placenta

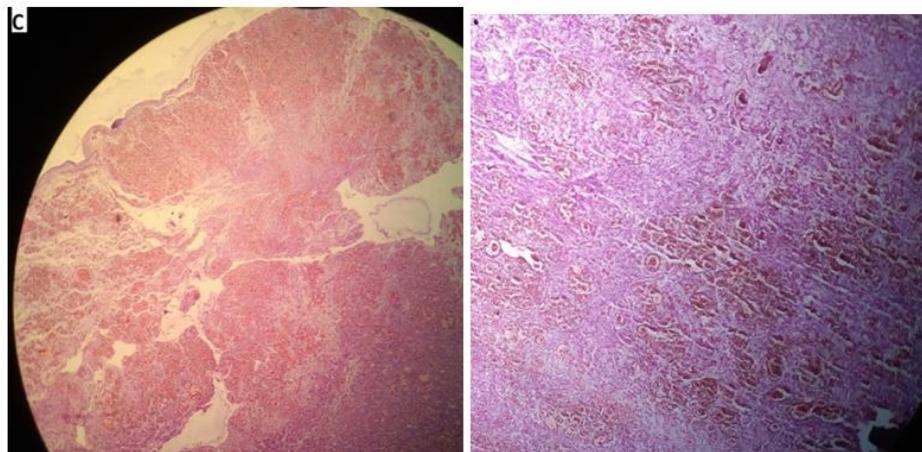


Fig-2: Low power & high power view of chorioangioma showing marked proliferation of capillaries

DISCUSSION

Chorioangioma is a benign vascular lesion of placenta. It arises from the primitive chorionic mesenchyme. The defined etiology of chorioangioma is not known. Large chorioangioma is rare tumors measuring more than 5 cm. The prevalence of it ranges from 1:9000 to 1:50000. Large chorioangiomas are associated with many fetal and maternal complications. These includes chorangiomas, premature delivery, premature placental separation and placenta previa [1-3].

Raised serum alpha-fetoprotein and human chorionic gonadotropin hormone levels should raise the suspicion of chorioangioma [4].

Maternal clinical manifestations of chorioangioma include polyhydramnios, premature labor, premature placental separation, and placenta previa, leading to high perinatal morbidity and mortality [1-3]. Chorioangiomas are supplied by fetal circulation [2]. An increased incidence rate of chorioangioma is associated with maternal age, hypertension, diabetes, female sex of the newborn [5].

The pathological changes seen in the neonates are anemia, thrombocytopenia, edema, non-immune hydrops fetalis, stillbirth, prematurity, intrauterine growth retardation, or fetal death [1, 2]. Most of the cases are diagnosed after delivery as in the present case [4].

Grossly, they may be brown, yellow, tan, red, or white and are usually firm and well demarcated from the surrounding parenchyma. The specific findings of chorioangioma are variable and depend largely on the histological composition of the tumor. Histologically they demonstrate mainly three types of pattern: Angiomatous, cellular, and degenerative. Angiomatous type is more common. Histological classification correlates well with the sonographic features. If it is predominantly vascular, color flow imaging reveals a hypervascularization pattern. Most chorioangiomas are composed of capillary-sized blood vessels supported by inconspicuous, loose stroma. Occasionally, they may be more cellular or show prominent myxoid change, hyalinization, necrosis, or calcification [6]. The tumor cells are positive for IHC marker like CD31, CD 34, factor VIII, GLUT 1, and cytokeratin 18 [1].

Chorioangioma grossly should be differentiated from blood clot. Other differential diagnosis includes

Chorangiomas and chorangiosis. Chorangiomas refers to an increase in the number of capillaries in the terminal villi and is associated with conditions resulting from chronic hypoxia. Chorangioma is defined as at least 10 fields with 10 villi with 10 capillaries per villus. Chorangiomas can appear microscopically similar to a chorangioma, as both demonstrate a proliferation of capillaries within a stem villus. However chorangiomas typically also shows a stromal proliferation between the capillaries and it can

occur in both a localized form or diffuse multifocal form [2].

CONCLUSION

Placental chorioangioma is a rare tumor which was confirmed by histopathology in this case. It is associated with several maternal and fetal complications. Regular antenatal workup and screening can improve outcome of pregnancy as the condition can be diagnosed with the help of ultrasonography. Early diagnosis can improve maternal and fetal health.

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