CASE REPORT

A Large Chorioangioma can Result in Adverse Perinatal Outcome

Shama Chaudhry[1], Rubina Hussain[2]

ABSTRACT

Chorangioma of the placenta is a common benign vascular tumor of the placenta with a frequency of about 1%. It is threatening as it often goes unnoticed and presents potentially serious fetal risks and making it necessary to keep the pregnancy under surveillance. It usually presents as a solitary nodule or, less frequently, as multiple nodules, consisting of blood vessels and stroma. Most of these tumors are small and have no adverse effects on the fetus. Large tumors are associated with complications affecting mother and the fetus which may cause sudden intrauterine fetal death. Chorangiomas act as peripheral shunts between arteries and veins, leading to progressive heart failure of the fetus. In the case prenatal diagnosis is achieved by ultrasonography and Doppler studies are used confirm the highly vascular nature of the mass. As the tumor is associated with unfavorable side-effects on the mother and fetus like polyhydroamnios, prematurity, toxemia, hydrops, fetal heart failure and, intra uterine death, regular monitoring is required to detect and manage complications early on in the pregnancy. A large size of the tumor is indicative of a higher probability of complications. The case presented is that of a large chorioangioma in a primigravida without any serious complications and a successful outcome.

KEY WORDS: *Chorangioma, Placental Tumor, Toxemia, Hydrops Fetalis, Intrauterine Fetal Death*.

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INTRODUCTION

Chorangioma as the name implies is the haemangioma of placenta arising from chorion. Chorangioma of the placenta is often associated with cutaneous and visceral haemangiomas in the fetus. These are the most common tumors of the placenta with an estimated prevalence of 1%.[1]

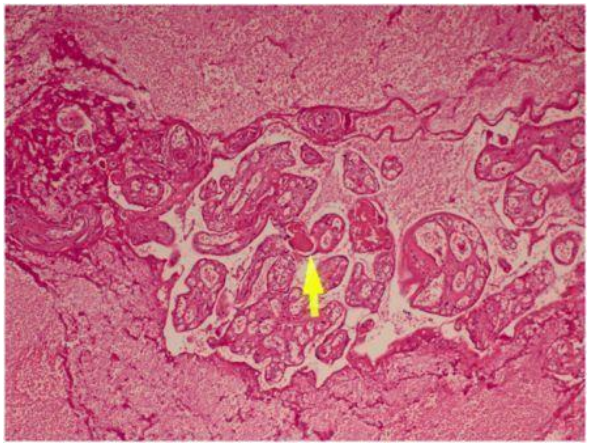
The rate of their occurrence increased incrementally with the progression of maternal age with chorangiomas found most often in women who are aged 30 and above. There probability of occurrence increases in primipara and twin pregnancies. Hypertension and diabetes are found more often in combination with chorangioma than they are in otherwise normal pregnancies.[2] Chorangioma are usually detected accidently during routine antenatal scan with the sonographic appearance of a solid or complex mass on the fetal surface of the placenta. It is mostly located underneath the Chorionic plate near the insertion of the umblical cord and often found protruding into the amniotic cavity. [3] Large tumors are rare and those exceeding 5 cm in diameter may be associated with serious fetal and maternal complications. Three histological patterns of Chorangiomas described in literature are angiomatous, cellular and degenerate. The angiomatous is the most common with numerous small areas of endothelial tissue, capillaries and blood vessels surrounded by placental stroma.[4]

Rationale of presenting this case report is, to create awareness among the obstetricians about the need of vigilance for patients having asymptomatic chorioangiomas for aiding them to anticipate possible forthcoming complications.

CASE

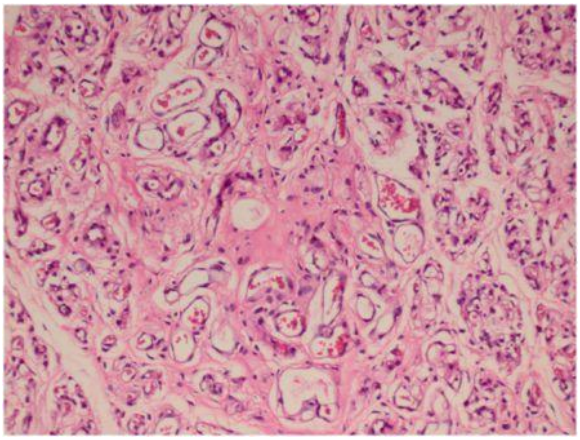
A 28 year old primigravida with 34 weeks of pregnancy married for one year was referred from primary care hospital for evaluation of a placental mass and suspected subclinical abruption. The mass was initially noted on fetal anomaly scan as a sub amniotic hematoma and on follow up the size of the mass remain same. Her pregnancy was spontaneous, planned and unremarkable. On presentation to us at 34 weeks of pregnancy, she was pale-looking; her B.P was 114/80 mmHg with a pulse of 73 b/min. Abdominal examination revealed height of fundus of 34cm with cephalic presentation. She had mild labour pains which were confirmed per abdomen 10-15 seconds occurring every 2 minutes. On vaginal examination cervix was found to be closed and the CTG showed late decelerations. The ultrasound showed the gestational age of fetus to be 34 weeks. The placenta was thickened and measured at 9.5cm. A slightly heterogeneous predominantly cystic area was identified at the edge of placenta in the lower part measuring 9.2cm x 8.7cm. On admission, her lab investigations showed hemoglobin of 7 g/dl, platelets 226×10^9, and random blood sugar was 86 mg/dl. Coagulation profile and renal function tests were within normal limits. After the diagnosis of fetal distress and suspected subclinical abruption LSCS was performed. An alive female baby of 1.8 kg was delivered with an Apgar score of 7 in 1 minute. Liquor was mixed with fresh blood. Three units of packed cells were transfused. On examination of placenta, there was a mass found which was sent for histopathology.

Figure 1: Predominantly capillary type proliferative blood vessels in chorangioma



Histologically, on gross examination, a red brown nodular firm area was identified measuring 9.2cm x 8.7cm. Microscopic examination revealed sheets of red cells, hemorrhage and fibrin. It was composed of multiple small compactly packed capillaries filled with red cells, features that are consistent with chorangioma (Fig 1, 2).

Fig 2: Higher power view showing cytologic features of lining endothelial cells in a chorangioma of the placenta.



DISCUSSION

One of the largest retrospective studies on 22,439 unselected placentas found 136 chorioangiomas with an incidence of 0.61%. Chorangioma is a non-trophoblastic tumor characterized by abnormal vascular development within the placental parenchyma, which is most frequently observed in the third, and less frequently in the second trimester of pregnancy as a solitary nodule or, less frequently, as multiple nodules. It is usually an incidental microscopic finding. Even though it has no fibrous capsule, it is sharply demarcated from the surrounding placental parenchyma by a single or less frequently, double layer of chorionic epithelium. It is most frequently found on the fetal surface of the placenta, often in the vicinity of umbilical cord insertion, with larger tumors being usually attached to the chorion.

Recognized maternal risk factors associated with chorangioma are advanced maternal age, hypertension and diabetes mellitus while fetal risk factors include multiple pregnancies and female gender[2]. The identified risk factors in this case were primiparity and gender of the neonate.

Different investigation modalities have been used for the early diagnosis and management of placental tumors, but Doppler ultrasound remains the investigation of choice. Doppler ultrasound not only helps in ruling out other differentials for placental masses such as degenerated myoma, placental teratoma, and incomplete hydatidiform mole, but can also be used for follow up in conservative management of placental masses in early stages of pregnancy.[6] Strong suspicion of chorioangioma on Doppler ultrasound rules out the need for additional expensive and sophisticated imaging modalities like MRI.

Chorangioma probably arise as malformations of the primitive angioblastic tissue of the early placenta. Immuno histochemical examination of tumor cells show focal staining for cytokeratin 18, a finding that suggests origin from blood vessels of the chorionic plate and anchoring villi.[7]

Chorangioma must be differentiated from other villous capillary lesions, namely, chorangiomatosis and chorangiosis. They have overlapping similarities with chorangioma, and have clinical implications. Chorangiomatosis has been associated with negative fetal outcomes such as intrauterine growth retardation (IUGR) and preeclampsia. Chorangiosis is associated with maternal diabetes mellitus.[8] Prenatal treatment by ultrasound guided interstitial laser therapy is one of the interventions to prevent complications of chorangioma besides the use of suture ligation, bipolar cautery, embolization and alcohol injection described in literature.[9] In our case the chorioangioma has been detected by scan in early pregnancy. The pregnancy was uneventful in spite of such a large chorioangioma and led to a successful outcome with conservative management. Large chorioangiomas are rare and it is not necessary that complications would always ensue. There is a place for conservative management with successful 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 with effectively.

Large chorioangiomas are rare and it is not necessary that complications would always ensue. Prenatal diagnosis is achieved by ultrasonography and Doppler studies will confirm the highly vascular nature of the mass. Despite its benign nature, chorioangiomas of large size are associated with adverse perinatal outcome and hence need a close follow up.

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