CASE REPORTS

Placental Chorioangioma: A Case Report

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Abstract

Chorioangioma constitutes the commonest benign growth of placenta. It consists of a benign angioma arising from chorionic tissue. Chorioangioma of the placenta most often goes unnoticed. With the advent of gray scale and color flow ultrasonography in prenatal diagnosis these tumours can be easily detected antenatally. It has potentially serious fetal risks and so the pregnancy needs to have regular surveillance. The larger the size of the tumor the more is the chance of developing complications. We present a case with large chorioangioma without any serious complications and a successful outcome.

Keywords: Chorioangioma, placenta.

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Introduction

Chorioangioma, originally described by Clarke in 1798, is the most common tumor of the placenta, with reported prevalence of approximately 0.5%–1.0% [1].Most chorioangiomas are small and are found incidentally at screening obstetric ultrasound examinations. The true prevalence of this tumor is likely unknown because many are thought to be undetectable without careful sectioning of the placenta as most chorioangiomas are minute and singular [2]. In fact, in one clinical series of 136 chorioangiomas, more than half of all tumors were discovered by using only histologic techniques[2]. Large (e"5-cm) or multiple chorioangiomas have been reported to occur at a rate of 1:3500 to 1:16,000 births[3]. Although most chorioangiomas are asymptomatic, large or multiple chorioangiomas have a dismal prognosis due to their high association with maternal and fetal complications (ranging from 30% to 50%), which include polyhydramnios, preterm labor, fetal hemolytic anemia, fetal thrombocytopenia, cardiomegaly, intrauterine growth restriction, toxemia, placental abruption, preeclampsia, and congenital abnormalities[2]. Keeping in mind all the possible complications, a routine antenatal screening ultrasound scan should include a screen of the placental composition and not just its location, to exclude a presence of a large chorioangioma. With prenatal diagnosis, more intensive monitoring of the pregnancy and perhaps means of decreasing the acute polyhydramnios may be attempted to decrease the high incidence of perinatal mortality and morbidity.

Case report

A 24 years old lady G_2 P_1 with history of a caesarean section had an uneventful pregnancy until 26th weeks when she gave a 5 days history of abdominal discomfort and respiratory difficulties on lying down. She was detected as a case of gestational diabetes mellitus 2 weeks back. Ultrasound examination showed a single fetus with normal morphology. There was hydramnios and a mass measuring 7 x 5 cm in the anterior lip of placenta consistent with placental chorioangioma . She was admitted in BIRDEM (Bangladesh Institute of Research and Rehabilitation in Diabetes, Endocrine and Metabolic Disorders) hospital Her blood group was 'O'positive, Hb % was 11.5, VDRL non-reactive .She was treated with bed rest, close fetal monitoring. She was on diabetic pregnancy diet and her DM was well controlled. A repeat ultrasonogram on 34th gestational week showed a normal growing fetus with good cardiac activities and cephalic presentation. Amniotic fluid index was 36 cm and size of the mass was 7x6 cm. Color Dopplar study of fetal cerebral vessels were normal. She was then treated with cap. Indomethacin (25 mg)

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thrice daily for 7 days and was discharged from the hospital with the advice of daily kick count. She came back to Gynae outpatient department with complaints of less fetal movement. Cardiotocography and biophysical profile was normal. Ultrasonography showed increased size of mass measuring 8x9 cm. Lower segment caesarean section was done at 37 weeks and had delivery of a female baby with normal Apgar score and birth weight of 2.7 kg. Placenta was delivered by controlled cord traction and sent for histopathology. Macroscopically, the placenta was 22x18x6.5 cms and weighed 1100 grams. There was a large well circumscribed lesion near the attachment of cord seen from the fetal surface of the placenta measuring 12x9x7.5 cms [Fig-1]. On sectioning this consisted of multiple dialated vascular channels. Areas of haemorrhage and necrosis were seen. Histopathology confirmed chorioangioma [Fig-2]. Both the mother and the baby were discharged in good condition following delivery.

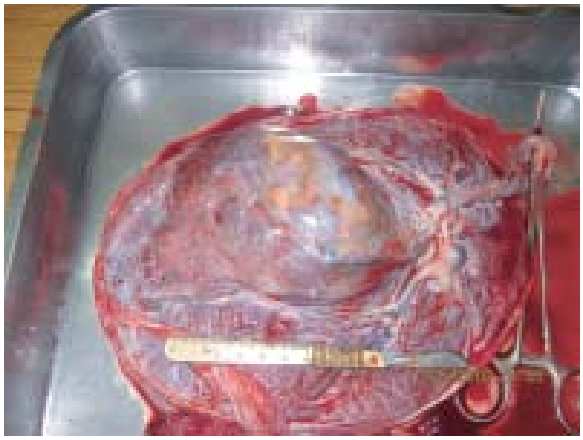

Fig.-1: *Placental chorioangioma from fetal surface of placenta.*

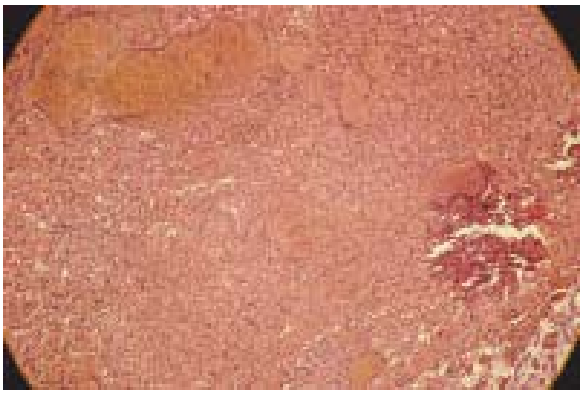

Fig.-2: *Microscopic view of placental chorioangioma showing multiple dilated blood vessels.*

Discussion:

Chorioangioma of the placenta is a benign vascular tumour arising from the primitive chorionic mesenchyme whose etiology is unknown.[4] This is the most common primary tumor of the placenta, followed by hydatidiform mole and choriocarcinoma. The incidence has been reported between 0.2 139:10,000 births. [5]. They were associated with increased maternal age, diabetes mellitus and hypertension. They are more common in multiple pregnancy and female babies.

Most chorioangiomas are of no clinical importance. Those measuring more than 5 cms in diameter may be associated with complications that can affect the mother, the fetus or the neonate.[6] The overall accepted incidence in the literature is 1 in 100 births. The recurrence risk is not yet known but appears to be very small. [7]

The most common clinical complication associated with chorio-angioma is hydramnios as we found in our case. The incidence of hydramnios has been found to be related to the size of the tumor. It occurs in 18 35% of patients with large tumors[8]. A complication of hydramnios is an increased incidence of preterm labor, premature rupture of membranes, and preterm delivery.

Most authors categorize chorioangiomas as neoplasms. However, there is some debate as to whether they are actually hamartomas, given their composition of mostly native placental tissue and their inability to metastasize[2]. Chorioangiomas have no malignant potential [9]. Three histologic types of chorioangiomas have been described: angiomatous (capillary), cellular, and degenerative, with angiomatous as the most common type [10]. Chorioangioma should be considered as a rare entity in the differential diagnosis of an elevated level of maternal á-fetoprotein in the serum [9].

Although most chorioangiomas are asymptomatic, large or multiplechorioangiomas have a dismal prognosis due to their high association with maternal and fetal complications (ranging from 30% to 50%), which include polyhydramnios, preterm labor, fetal hemolytic anemia, fetal thrombocytopenia, cardiomegaly, intrauterine growth restriction, toxemia, placental abruption, preeclampsia, and congenital abnormalities[11].

At gray-scale Ultrasonography examination, chorioangioma is a hypo- or hyperechoic circumscribed mass that is distinctly different from the placenta and

contains anechoic cystic areas [12]. Large lesions may or may not contain fibrous septa, which create the appearance of a complex mass [13]. The tumor classically protrudes into the amniotic cavity from the fetal surface near the cord insertion.The differential diagnosis of placental tumors includes partial hydatidiform mole, placental hematoma (intraplacental or subchorionic), teratoma, metastases, and leiomyoma [4]. Again, the use of color Doppler imaging can confirm the presence of vascular channels in the tumor contiguous with the fetal circulation, findings that exclude degenerative leiomyoma , teratoma, and incomplete hydatidiform mole [13].Chorioangioma is usually treated with expectant management, as the majority of tumors are asymptomatic. Small tumors are usually monitored with Ultrasonography every 6–8 weeks, whereas large tumors require serial Ultrasonography examinations every 1–2 weeks [9]. In situations in which maternal or fetal complications necessitate intervention, there are several possible treatments. However, most of these cases have a dismal prognosis [13]. Possible interventions include serial fetal transfusions, fetoscopic laser coagulation of vessels supplying the tumor, chemosclerosis with absolute alcohol, and endoscopic surgical devascularization [11].

Conclusion

Large chorioangiomas are rare and it is not necessary that complications would always ensue. There is a place for conservative management with successful outcome as has been described in the literature [13]. 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.

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