

## Case Report

### Placental Chorioangioma and Preterm Labour: A Case Report

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**Abstract:** We present a case of Chorioangioma with associated polyhydramnios detected antenally on ultrasonography resulting in preterm labour and confirmed on histopathology post natally.

**Keywords:** chorioangioma, polyhydramnios, preterm labour

#### INTRODUCTION

Placental chorioangiomas are the most common benign placental tumors, accounting for approximately 1% of all pregnancies [1]. Prevalence of large tumors is smaller, varying from 1 per 500 to 1 per 16,000 placentas examined. They are usually single tumors but can be multiple. Chorioangioma consists of a benign angioma arising from chorionic tissue. Chorioangioma is often associated with unfavourable effects on the mother as well as on the fetus.

#### CASE REPORT

A 26 year old G3P1A1 with previous caesarean section at 31 weeks period of gestation referred to our hospital as a case of polyhydramnios. An ultrasound done at her first antenatal visit at 22 weeks showed no

abnormalities. The pregnancy was uneventful till 33 weeks of gestation except polyhydramnios.

She presented at 33 weeks of gestation with pain abdomen. On examination the abdomen was tense and fundal height was 4 weeks more than the period of gestation and there were moderate contractions. An ultrasound scan revealed that fetus was in breech position. Fetal biometric parameters were equivalent to dates and no gross fetal anomalies were seen. The placenta was posterior upper uterine segment. An irregular growth of size 9.6cm×6.3cm with blood flow pattern consistent with chorioangioma found on it (fig. 1). Liquor amount increased with amniotic fluid index of 25. Fetal echocardiography revealed mild tricuspid regurgitation. Blood sugar levels were normal.



Fig. 1: An irregular growth of size 9.6cm×6.3cm with blood flow pattern consistent with chorioangioma

The patient underwent lower segment caesarean section for prior caesarean with preterm breech presentation at 33 weeks of gestation.

#### Examination of placenta

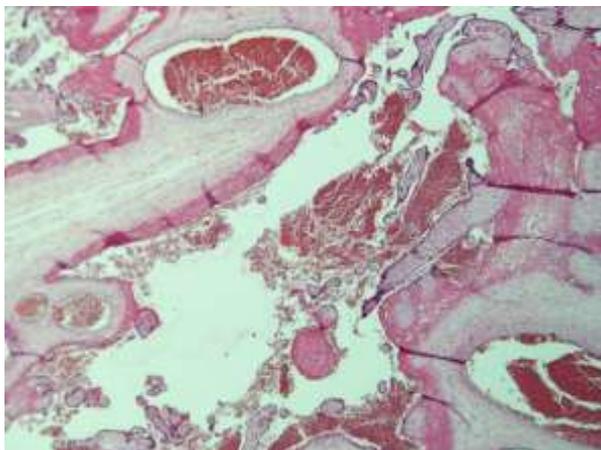
##### Gross examination

The placenta measured 21×19×9.5cm and weighing 1030gms. Maternal surface was grey brown showing cotyledons. Fetal surface is grey brown glistening with prominent vessels. A single lobulated soft tissue mass measuring 9×7.5×7 cm attached more towards maternal side was identified.

### Microscopic examination

Representative sections from the lobulated soft tissue showed numerous thin walled blood vessels along with few large thick walled vessels and scanty loose intervening stroma. Areas of infarction necrosis and

calcification also noted. Areas of fibrinoid change and haemorrhage were seen. From these microscopic pictures it was diagnosed to be angiomatous chorioangioma (fig. 2).



**Fig. 2: Numerous thin walled blood vessels along with few large thick walled vessels and scanty loose intervening stroma**

### DISCUSSION

Placental chorioangioma is the most common benign tumour of the placenta, occurring in approximately 1% of all pregnancies or in 0.5-1% of all placentas examined at term [1]. Most chorioangiomas are small and are found incidentally at screening obstetric US 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]. It consists of a benign angioma arising from chorionic tissue. Three histological patterns of chorioangiomas have been described: 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.

The cellular pattern has abundant endothelial cells within a loose scanty stroma. The degenerate pattern has calcification, necrosis or hyalinization [3].

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 [4].

### Complications of chorioangioma

Of the various reported clinical complications, the correlation of chorioangioma with hydramnios and premature delivery is significant, latter being a sequela of the hydramnios. The association with hydramnios is significantly correlated with the presence of large tumours. Theories for polyhydramnios include (a) transudation of fluid caused by a mechanical

obstruction of blood flow by the tumor near the cord insertion, (b) increased transudation of fluid through a large vascular surface area, and (c) functional insufficiency of the placenta secondary to bypassing fetal circulation via shunt mechanism into the tumor vascular bed [5]. Fetal congestive heart failure may develop because of the increased blood flow through the low resistance vascular channels in the chorioangioma acting as an arteriovenous shunt. Other associated complications being hydrops, anemia and growth retardation [1].

Antenatal ultrasound has made diagnosis and follow up possible before delivery. Usual gray scale findings include intraplacental subchorionic location, well-defined circumscription, complex echogenicity different from rest of the placenta, single or multiple tumours and protusion into the amniotic cavity near the insertion of the umbilical cord [6].

Chorioangiomas show vascular channels in the tumour, which show pulsatile flow in the vascular spaces of the tumour, at the same pulsation rate as the umbilical cord. Color Doppler imaging is important not only for differentiating chorioangioma from other placental lesions but also for confirming that vascular channels in the tumour are continuous with the fetal circulation, thus ruling out other diagnosis such as degenerated myoma, placental teratoma and incomplete hydatidiform mole [7,8].

Due to the apparently high fetal death rate associated with large chorioangiomas, early diagnosis is necessary so that fetal surveillance can be instituted. In the present case characteristic gray scale and Doppler findings

confirmed the diagnosis of chorioangioma. Doppler studies were particularly useful in confirming the presence of vascular channels with a pulse rate equal to the fetal heart rate.

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