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Chorioangioma in Twin Gestation - A Case Report

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ABSTRACT

Large Chorioangioma may be present as a separate mass inside the gestational sac and create fetal complications. We report a case of chorioangioma in twin gestation underwent emergency LSCS in view of ominous NST. Unexpected findings in second amniotic sac with meconium-stained liquor at 34 weeks of gestation. Histopathology confirmed the diagnosis. Though it is a benign tumour, complications can not be excluded.

Keywords: chorioangioma, Twin gestation, Fetal complications

INTRODUCTION

Chorioangioma is the most common benign tumour of the placenta, and it affects almost 1% of pregnancies. In a large retrospective study of 22,000 placental exams, 138 chorioangiomas were found, with an incidence of 0.6%. [1] More often, it was found in pregnancies involving female infants. Although there was no evidence of a tumour in the first trimester, chorioangiomas are believed to develop by the sixteenth day of fertilization. [2] It is usually vascular and comes from early chorionic mesenchyme. In a substantial proportion of cases, placental chorioangiomas were linked to polyhydramnios, foetal growth restriction, and foetal distress. Three characteristics that affect maternal and foetal complications are the size, vascularity, and location of the chorioangioma. Any one of these three variables may have an impact on the pregnancy's outcome. For prenatal diagnosis of chorioangiomas, ultrasound and colour Doppler flow mapping are crucial to minimising the risks to the fetus' well-being. Close monitoring of the pregnancy and caesarean delivery at the first signs of foetal cardiac decompensation are recommended to reduce foetal and neonatal problems. Smaller ones are generally asymptomatic. Chorioangiomas that are usually large (more than 4 cm) or many in number may cause complications. [3,5] Preterm labor, hemolytic anemia, foetal cardiomegaly, foetal thrombocytopenia, intrauterine growth restriction, preeclampsia, placenta abruption, and congenital abnormalities are all possible complications. [4,6] They are often misdiagnosed as blood clots, deteriorated myomas, and placental teratomas. Chorioangiomas can be distinguished from other tumours by the presence of vascular channels that resemble foetal vessels. While the chorioangioma echo pattern does not change over time, the blood clot echo pattern does. Here we report a case of placental chorioangioma in a twin pregnancy at 34 weeks of gestation.

CASE REPORT

A 23-year-old primigravida at 34+1 weeks of gestation came for a regular antenatal checkup, and she was admitted for safe confinement. Her menstrual cycles were regular; it was a spontaneous conception. She underwent regular antenatal check-ups at our hospital. No significant medical or surgical history was present. The dating scan at 8 + 1 weeks revealed a dichorionic

and diamniotic pregnancy with 17 X 8 mm of subchorionic haemorrhage in the superior pole of the second gestational sac. Her scans done at 12 weeks and 28 weeks did not show any abnormalities. At 33 weeks, an antenatal scan revealed a well-circumscribed solid isoechoic lesion in placental tissue with low resistance arterial flow: chorioangioma in sac B, polyhydramnios in the same sac [single deep pocket, 11.5 cm]. At the time of examination at 34 weeks and 1 day, her general condition was fair; her abdomen was overdistended, multiple foetal parts were palpable, and FHRs of 152 bpm and 140 bpm were recorded. She was evaluated and monitored at our facility.

At 34 + 3 weeks of gestation, she was posted for emergency LSCS in view of the ominous NST of the second twin. The first twin, a boy baby weighing 1.93 kg delivered as vertex, cried immediately after birth. When the second sac was ruptured, plenty of grade 2 meconium stained liquor drained. A 1.7-kg girl baby was delivered as a vertex, and she cried after tactile stimulation. The second sac yielded an 8 X 6 cm globular mass [a chorioangioma] lying separately but within the placental membranes. Two separate placentas and membranes were removed entirely. The placenta, along with the chorioangioma, was sent for histopathology examination. Both the intraoperative and postoperative periods were uneventful. The total amount of blood lost was 700 mL. She was discharged on the fifth postoperative day without any complications.

HISTOPATHOLOGY REPORT

Dichorionic diamniotic placenta weighing 377 and 373 gms respectively. Chorioangioma – brown nodular soft tissue measuring 6*7*4.5cm .Cut section – grey white to brown areas of hemorrhage

Microscopy – a neoplasm composed of proliferating thick walled capillaries with plump endothelial cells admixed with a few large thick walled vessels with lumen showing thrombi in a loose edematous to myxoid stroma. Extensive areas of hyalinisation, Hemorrhage and infarction. No mitosis or infarction noted in the stroma

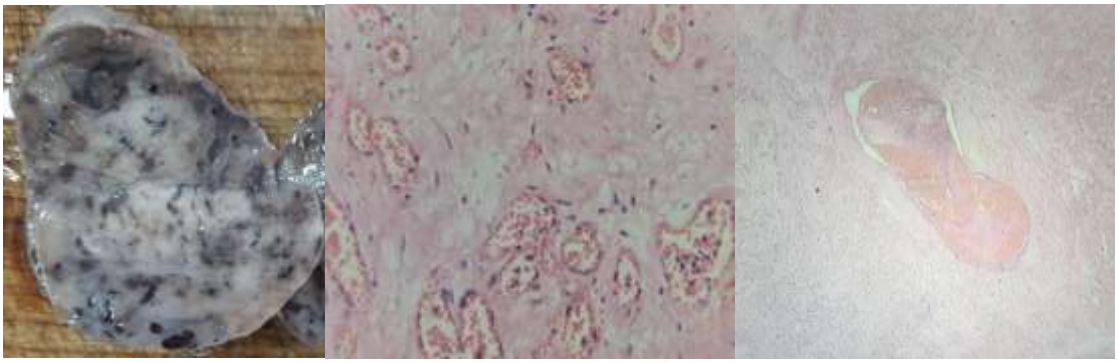

Figure 1: cut section and microscopy of chorioangioma

DISCUSSION

Chorioangioma of the placenta was considered a rare tumour of the placenta with a low incidence. The presence of cytokeratin 18 in tumour cells suggests that they are derived from blood vessels of the chorionic plate and anchoring villi. When the size of the chorioangioma increases, it is associated with a high prevalence of pregnancy complications and a poor maternal and foetal outcome. They are often seen in primiparous and twin pregnancies. [7,8]

The chorioangioma is derived from the primitive chorionic mesenchyme. The occurrence of this benign neoplasm is when the blood vessels and stroma undergo rapid proliferation, irrespective of the surrounding tissue. Chorioangioma is classified by Marchetti [9] into three types: based on the microscopy [10]

Cellular type: This is immature, and the majority contains cellular elements that appear in a compact manner.
Vascular or Angiomatous type: most common type of chorioangioma. It is differentiated by the presence of numerous small blood vessels.
Degenerative type: mature type with degenerative changes.
Each type is thought to represent a phase of tumour development. Chorioangioma is a proliferating neoplasm, but it has no malignant potential. Ultrasonography with colour Doppler helps in the prenatal diagnosis of this condition7. They are generally picked up in an antenatal scan done in the second trimester. A chorioangioma is seen as a hypo- or hyperechoic, circumscribed mass that is different from the placenta at a gray-scale ultrasound examination. Chorioangiomas cause massive arteriovenous shunts within the placenta, diverting blood away from the foetus, resulting in utero-placental insufficiency and growth restriction.11
A frequent complication of chorioangioma is polyhydramnios. One of the studies explains that one possible explanation was the close proximity of the tumour to the umbilical cord. The chorioangioma may have compressed the umbilical vessels, causing fluid accumulation.12
A few case reports of chorangiomatosis revealed that meconium-stained liquor was present in those who requested LSCS due to foetal distress. Meconium-stained liquor and chorioangioma were related, perhaps because of their relation to foetal distress. In my case, we had posted for LSCS because of an ominous NST, and the second amniotic sac contained meconium-stained liquor.
Because chorioangiomas are asymptomatic, expectant management is the main recommendation. Large tumours can be monitored with an ultrasonogram and Doppler every 1–2 weeks. If severe maternal or foetal complications occur, we can use serial foetal transfusions, absolute alcohol chemosclerosis, foetal laser coagulation of vessels that supply blood to chorioangiomas, and endoscopic surgical devascularization. In our case, she was admitted for conservative management. Emergency LSCS was done due to ominous NST and findings were indicative of complications arising from the chorioangioma measuring 7 X 6 X 4.5 cm.

CONCLUSION

Chorioangioma is a rare condition, and it is also challenging. Early diagnosis and close follow-up are needed, though it is a benign neoplasm, since foetal complications are being observed.

Declaration by Authors

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