

Case Report

A case of chorioangioma with polyhydramnios

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Chorioangioma is the most common benign placental tumor arising from the chorionic stroma and capillaries, and histologically accounts for about 1% of placental tumors¹⁾. It rarely exceeds 5 cm in diameter, and is clinically diagnosed in 1 out of every 8,000-50,000 patients¹⁾. We report a patient with a relatively large chorioangioma (10 cm in diameter) accompanied by polyhydramnios.

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Case Report

The patient was a 25-year-old primipara with no remarkable past or family history. She had been under the care of her previous doctor since early pregnancy. A tense feeling of the abdomen increased from the 32nd week of pregnancy, and she was referred to our hospital. Ultrasound examination showed marked polyhydramnios with an AFI of 45, uterine contractions, and cervical maturation. Two thousand and five hundred ml of amniotic fluid was removed, and a transfusion of ritodrine hydrochloride was started. Ultrasonography showed no fetal abnormalities, but revealed a 10-cm mass in contact with the placenta. It was a multilocular, hypoechoic cyst with hyperechoic foci (Fig. 1). T2-weighted MRI showed a well-defined mass that was more hypointense than the placenta (Fig. 2). After 1,200ml of amniotic fluid was removed, signs of preterm labor were alleviated. However, the peak blood flow velocity of the fetal middle cerebral artery gradually increased, and the fetus showed anemia at 35 weeks and 6 days of gestation. At the same time, fetal heart rate monitoring revealed a non-reassuring pattern; therefore, emergency cesarean sec-

tion was performed. The newborn was a girl weighing 2,730 g, with an Apgar score of 4 and 6 (1 and 5 min, respectively) and an umbilical arterial blood pH of 7.32.

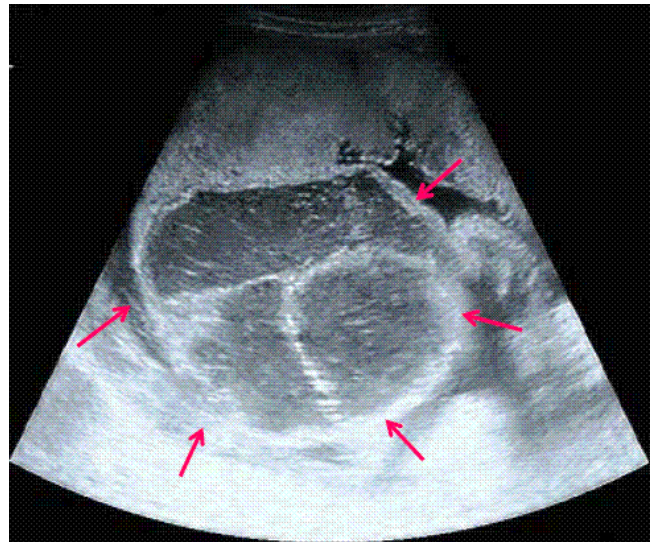


Figure 1. Ultrasound image of a chorioangioma (35 weeks of gestation). A 10-cm, cystic, well-demarcated mass was seen protruding from the placenta toward the fetal side.

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Since she had respiratory distress, she was admitted to the NICU. There was marked generalized edema, and she showed weight loss of 22% on the 6th day after birth (Fig. 3). Mild anemia was present at birth, but did not progress thereafter, and so no blood transfusion was performed. The

baby was discharged with her mother at 15 days of age, and followed an uneventful course. A dark-red mass of 10 cm in diameter was found to be attached to the delivered placenta with thick blood vessels (Fig. 4), and was histopathologically diagnosed as chorioangioma.

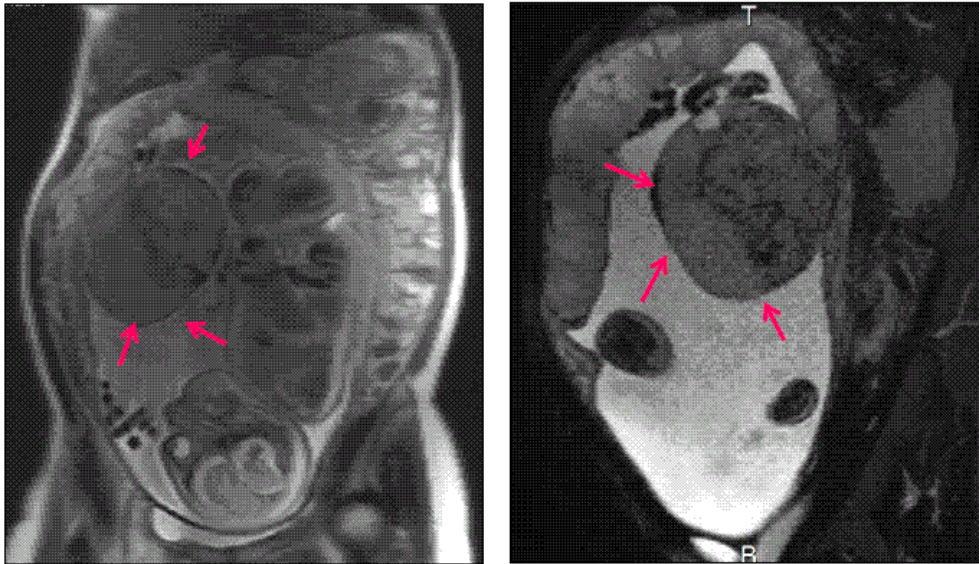


Figure 2. MR image of the chorioangioma (35 weeks of gestation). On T2-weighted images, a well-demarcated mass slightly more hypointense than the placenta was seen.

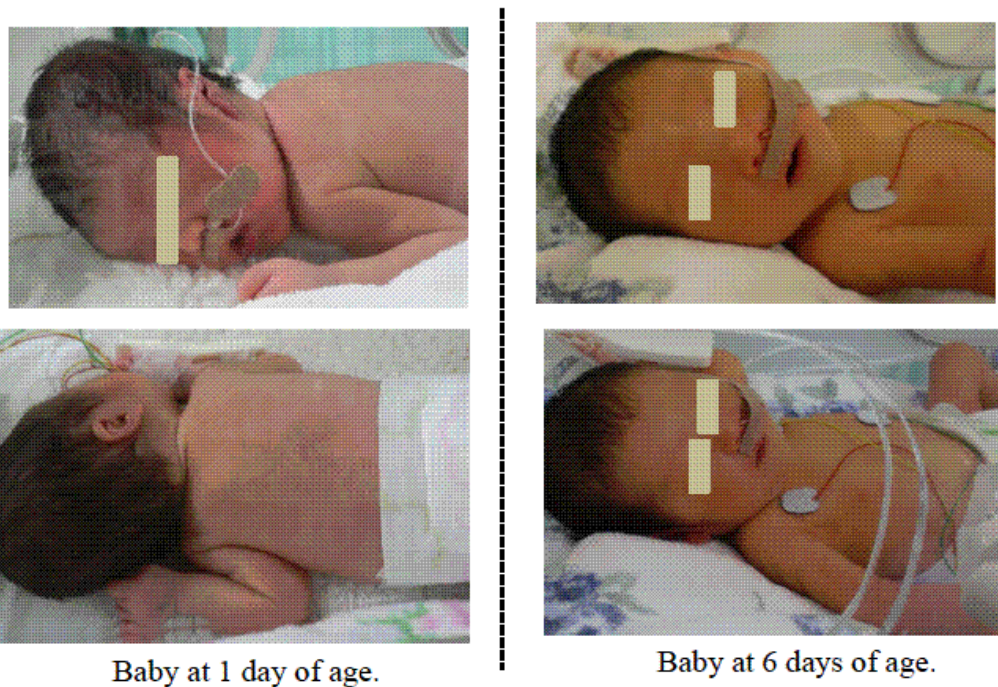


Figure 3. Baby at 1 and 6 days of age. The baby had generalized edema at 1 day of age, which had improved at 6 days of age. a well-demarcated mass slightly more hypointense than the placenta was seen.

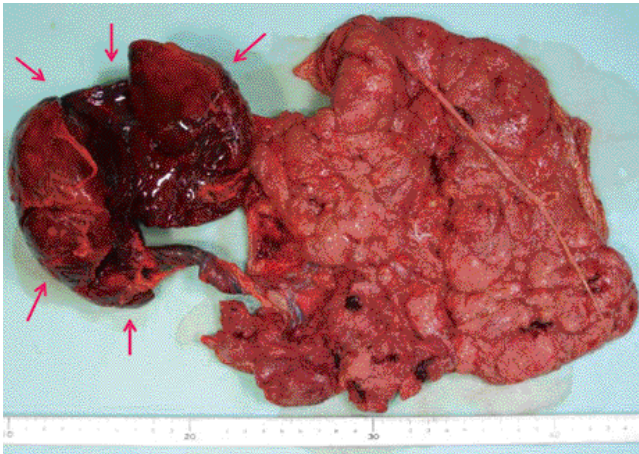


Figure 4. Gross appearance of the placenta. A 10-cm chorioangioma was found to be attached to the placenta with an umbilical cord and blood vessels.

Discussion

Chorioangioma may be complicated by maternal polyhydramnios, which is believed to result from compression of the umbilical vein by a tumor, body fluid imbalance caused by fetal polyuria and congestive heart failure, and leakage of water from abnormal vascular walls and fetal body surface^{2,3}. Studies have reported that the complication is likely to occur in patients with chorioangiomas larger than 5 cm in diameter¹, in patients with tumors regardless of their size², or in patients with richly blood-supplied tumors regardless of their size³.

On ultrasound, chorioangiomas are visualized as well-defined, solid masses, which usually bulge out on the fetal surface of the placenta, and contain solid or cystic components. They can be differentiated from hematomas by the presence of blood flow on ultrasound color Doppler imaging. Chorioangiomas are visualized as well-defined masses isointense to the placenta on T1-weighted MRI images and more hypointense than the placenta on T2-weighted MRI images.

When managing patients with chorioangiomas, special

attention should be paid to the tumor diameter, amniotic fluid volume, signs of preterm labor, fetal growth, fetal hydrops, and fetal anemia. Since complications such as polyhydramnios and preterm labor often occur, amniotic fluid is removed, or tocolysis is administered. Measurement of the peak blood flow velocity of the fetal middle cerebral artery is useful for the evaluation of fetal anemia⁴. Since it is a noninvasive test, it can be performed repeatedly. Frequent monitoring of the fetal heart rate and ultrasound imaging should be performed to determine the timing of labor without overlooking the deterioration of the fetal condition.

Conclusion

We report a case of chorioangioma complicated by polyhydramnios. Chorioangioma may be complicated by polyhydramnios, preterm labor, fetal hydrops, fetal anemia, and poor fetal growth. In particular, if polyhydramnios has developed as a complication, it is necessary to manage the polyhydramnios and preterm labor and determine the timing of labor while paying attention to the presence or absence of fetal hydrops and anemia. In addition, in the case of polyhydramnios or fetal hydrops of unknown origin, the placenta should be examined carefully with the suspicion of a placental tumor.

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