



## Placental chorioangioma and fetal hepatic hemangioma coexistence causing fetal high-output heart failure

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### Objective

Placental chorioangiomas occur in approximately 1% of pregnancies and are derived from primitive chorionic mesenchyme. Chorioangioma is the most common benign non-trophoblastic tumor of the placenta and is typically vascular. Those placental chorioangiomas measuring more than 4–5 cm in diameter may be associated with maternal and fetal complications. Liver tumors seldom occur in the perinatal period. Hepatic hemangiomas are the most common tumors of the liver diagnosed during fetal and neonatal life. The diagnosis can be suspected antenatally by ultrasound and MR scan. The differential diagnosis is often challenging. While small hepatic hemangiomas are usually asymptomatic, large tumors can lead to complications such as high-output congestive heart failure, and consumptive thrombocytopenic coagulopathy. We describe a case of coexistence of hepatic hemangioma and placental chorioangioma presenting with fetal high-output cardiac failure.

### Methods

Case: A primigravida was referred to our clinic for polyhydramnios and fetal cardiomegaly in the 25 gestational week. The ultrasound examination revealed a normal fetal anatomy and a placental solid mass with a 43 mm diameter. Doppler examination revealed blood flow in the mass. Radiofrequency ablation was performed under general anesthesia with a diagnosis of placental chorioangioma and high-output cardiac failure due to arteriovenous shunting. The procedure resulted in cessation of bloodflow through the tumor feeder vessel. However, fetal cardiomegaly and polyhydramnios persisted and at 32 gestational age a solid mass with increased blood flow was detected in the fetal liver, and it was thought to be a evolving hemangioma. Delivery was decided after steroid administration because of absent umbilical artery end diastolic flow.

### Results

A 1700 gram fetus was delivered by cesarean section with an Apgar score of 4 at 5 minutes. The diagnosis was confirmed with MRI after delivery. Unfortunately, two days after delivery the infant has died due to heart failure, pneumothorax and hemorrhage caused by severe thrombocytopenia.

### Conclusion

The presence of large placental chorioangioma is associated with fetal growth restriction and hyperdynamic state in the fetus. The fetus should be evaluated for the presence of another arteriovenous malformation accompanying for the ongoing hyperdynamic condition after successful radiofrequency therapy.

