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Pregnancy with chorioangioma: a placental disorder that causes fetal death



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ABSTRACT

Introduction: Chorioangioma is the most common non-trophoblastic vascular tumor of the placenta. It was estimated that the incidence of chorioangioma was 1%. Although the incidence was not widely large, it has high mortality and morbidity. Commonly, chorioangiomas is a small asymptomatic lesion found only after birth after careful excision of the placenta. In making it easier to visualize the food vessels entering the placental mass and peritumoral diffuse vasculature we could use the color doppler. The wide range of outcomes and limited studies related to this case makes it quite difficult to handle. Thus, this study aimed to provide information on chorioangioma from diagnosis to the management.

Case description: Mother A is our referral patient who was recommended to do an ultrasound, with a diagnosis of 20 weeks gestation with suspected IUFD and a cyst in the placenta measuring 6.5cm x 4.1cm x 5.4 cm, the mother has not felt fetal movement. Ultrasound examination revealed a hematoma at the time of insertion of the umbilical cord in the placenta. The location of the placenta in the corpus anterior grade 1. No heartbeat was found in the baby, and the baby's weight was 529 grams.

Conclusion: The adverse outcome is known to be associated with chorioangioma. It depends on the mass size, and the existence of fetal hydrops. The worst prognosis that we found in this case was no heartbeat when the baby was born.

Keywords: Chorioangioma, pregnancy, placental tumor.

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INTRODUCTION

Chorioangioma is the most common non-trophoblastic vascular tumor of the placenta. It was estimated that the incidence of chorioangioma was 1%.¹ Although the incidence was not too large, it has high mortality and morbidity. Unfortunately, the etiology of chorioangioma is still unknown.^{2,3} Commonly, chorioangiomas is a small asymptomatic lesion found only after birth after careful excision of the placenta.⁴

The diagnosis can be made with ultrasound investigations. Characteristics of chorioangioma on ultrasound examination are the existence of a hypoechogenic with a round shape, well-defined placental mass, and a homogeneous or heterogeneous structure located. We can find it on the surface of the placenta. In making it easier to visualize

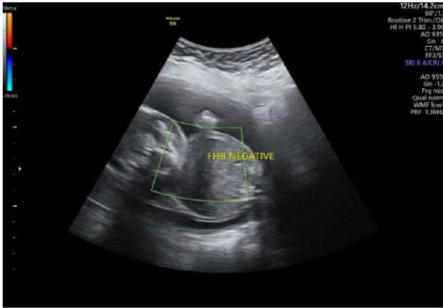
the food vessels entering the placental mass and peritumoral diffuse vasculature we could use the color doppler. If the sign of high-output heart failure is present, it indicates a severe case, particularly with cardiomegaly, polyhydramnios, increased velocity in the middle cerebral artery (MCA), and fetal hydrops may coexist with the tumor.⁵

Besides considering the size of the mass, and the presence of hydrops, another parameter could determine the fetal complication. The complications that might happen such as fetal anemia, *hydrops fetalis*, fetal growth restriction, polyhydramnios, and preterm delivery. The wide range of outcomes and limited studies related to this case makes it quite difficult to handle.⁶ Thus, this study aimed to provide information on chorioangioma from diagnosis to management.

CASE DESCRIPTION

Mother A is our referral patient who was recommended to do ultrasound, with a diagnosis of 20 weeks gestation with suspected IUFD and a cyst in the placenta measuring 6.5cm x 4.1cm x 5.4 cm, the mother has not felt fetal movement. This was the third pregnancy with a history of cesarean section 2 times. There were no complications in her previous pregnancy and she was born safely.

Ultrasound examination revealed a hematoma at the time of insertion of the umbilical cord in the placenta. The location of the placenta in the corpus anterior grade 1. The placenta was the majority of diameter measurement results placenta and placental area in a category, not enough. Polyhydramnios we found as a complication of chorioangioma in this case. Reducing the amount of amniotic



Figures 1. No fetal heartbeat found.

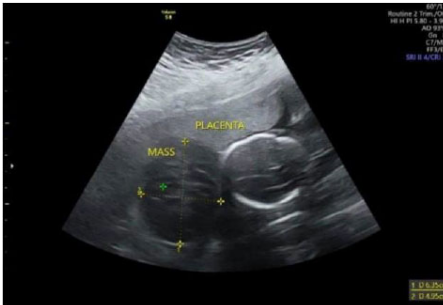


Figure 2. On the discovery of the placenta, there is a mass measuring 6.35 cm x 4.95 cm in the fetal placenta.



Figures 3. There is a solid mass in the placenta.

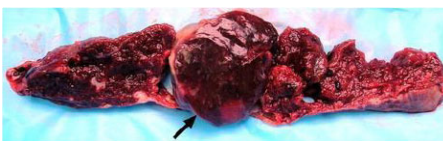


Figure 4. Placenta with mass/chorioangioma.

fluid we performed an amnioreduction by lowering intrauterine pressure, the risk of premature uterine contractions, and the risk of preterm delivery. Then the fetus was terminated immediately, and a cesarean section was performed. No heartbeat was found in the baby, and the baby's weight was only 529 grams. No abnormalities



Figure 5. Fetuses born by cesarean section with the male sex. newborn baby weight 345 grams.

were found in the fetus, the sutures were normal, the fetal organs were normal, and the sex of the fetus was male.

DISCUSSION

The gold standard in ultrasound diagnosis is ultrasound. Sometimes chorioangiomas are not detected by ultrasound if they are small. In general, patients with this condition are only treated conservatively. In asymptomatic cases, no special treatment is needed. However, the patient is still monitored closely with ultrasound examination to predict possible complications that may occur. In our case, the patient was given corticosteroids for lung maturation.⁷ In this case the USG was done because the baby was born prematurely due to premature uterine contractions along with cervical incompetence that appeared clinically. Another case report established the same case. They found a placental chorioangioma of 6 x 5 cm in size within the center of the umbilical cord with a feeding vessel by using USG examination.⁶

Complications can occur both at the beginning and at the end of labor. At the end of pregnancy can occur planned delivery is a reasonable choice and vice versa. However, most complications occur early in pregnancy, making iatrogenic preterm delivery inappropriate because of the high risk of mortality and morbidity secondary to prematurity.⁸

Polyhydramnios might happen in this case as a complication.⁹ It was also found in our case. Reducing the amount of amniotic fluid we performed an amnioreduction by lowering intrauterine pressure, the risk of premature uterine contractions, and

the risk of preterm delivery. Similar to other case reports that found the same complication in chorioangioma and performed amnioreduction to decrease the amniotic level. Unfortunately, the mechanism of polyhydramnios related to chorioangioma was not completely understood. It was suspected due to the obstruction of blood flow thus it increases the extravascular pressure and transudation came into the amniotic cavity, or there was an insufficiency caused by shunting of the fetal blood into the vessels of the chorioangioma.¹⁰

Another complication that has been reported was a fetal cardiovascular disturbance. This can occur when the chorioangioma reaches a size of >4–5 cm and can put pressure on the fetal cardiovascular system accompanied by increased amniotic fluid, fetal growth restriction, fetal hydrops, and death. This condition can occur in 30–50% of cases.² It was found in our case, that no fetal heartbeat was found. A Better prognosis was stated in Erlambang *et.al.*, case report that a baby boy was born alive without any growth disturbance, and the maternal complication was none.¹¹ A systematic review and meta-analysis reported that perinatal mortality occurred in chorioangioma. Around 31.2% (95% CI, 18.1 – 46.1%) of fetuses underwent in-utero therapy, 23.6% for IUD and 17.5% for NND.¹² Prognosis of patients either in maternal or fetus aspect was a wide range. Thus, determining all possible risk factors are needed to get a better outcome.

CONCLUSION

The adverse outcome is known to be associated with chorioangioma. It depends on the mass size, and the existence of fetal hydrops. The patient outcome in our cases was found no heartbeat when the baby was born.

DISCLOSURE

Conflict Of Interest

None.

Author Contribution

All of the author.

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