Available online at www.medicinescince.org

Case Report

Medicine Science 2016;5(4):1037-9

Medicine Science International Medical Journal

A giant chorioangioma of the placenta with favorable outcome: a rare case presentation with literature review.

Fatma Beyazit[1], Ceren Canbey Göret[2], Eren Pek[1], Meryem Gencer[1]

[1]*Department of Obstetrics and Gynecology, Canakkale Onsekiz Mart University, Canakkale, Turkey*
[2]*Department of Pathology, Canakkale Onsekiz Mart University, Canakkale, Turkey*

Received 15 Fabruary 2016; Accepted 20 April 2016
Available online 20 May 2016 with doi: 10.5455/medscience.2016.05.8481

Abstract

Chorioangioma, or hemangioma of the placenta, is the most frequent non-trophoblastic tumor of the placenta consisting of blood vessels and stroma. A great proportion of these tumors are small and well delineated within the placental parenchyma and have no or minimal adverse impact on the fetus. Unfortunately, large tumor size is linked to serious complications such as fetal anemia, hydrops and intrauterine death. This is probably because of arteriovenous shunts leading to progressive heart failure of the fetus. With the increasing rates of antenatal screenings with ultrasonography, prenatal diagnosis of these tumors is widely achieved. Here we report a case of giant placental chorioangioma diagnosed in the second trimester of pregnancy. The size of the tumor minimally increased during follow-up and at term, uncomplicated labor was achieved. Macroscopic and histologic examination confirmed the diagnosis.

Keywords: Pregnancy, placenta, chorioangoma

Introduction

Placental chorioangiomas are the most common placental tumors derived from primitive chorionic mesenchyme and are typically of vascular origin [1]. Although they can be detected in 0.6-1% of placentas with pathomorphological analysis, clinically evident chorioangiomas are rarely seen, with an incidence varying from 1:500 to 1:16,000 placentas examined [2,3]. Usually seen as a single tumor, some of them can present as multiple tumors. Unfortunately, the existence of a chorioangioma is usually associated with a dismal prognosis, and therefore, every effort should be made to recognize these lesions. Ultrasonography (USG) is the way of prenatal diagnosis of placental chorioangiomas and with color flow and pulsed Doppler, USG has a crucial value for both follow-up and to estimate prognosis of this benign tumor [4]. Sonographic appearance of a chorioangioma typically shows a well-defined and round-shaped lesion with an echogenicity different from that of placental tissue located near the chorionic plate and the umbilical cord insertion site [5].

Chorioangiomas may have clinical implications depending on the site of the lesion, their size and their vascularity [6]. Usually being referred as small lesions, giant chorioangiomas (>4 cm) are very rare and usually associated with adverse fetal and maternal complications, such as cardiomegaly, fetal anemia, growth restriction and intrauterine fetal death [4]. We would like to present a case of giant chorioangioma that was successfully followed-up in our institution with the birth of a full-term newborn without any complications.

***Corresponding Author:** Fatma Beyazit,
Esenler mahallesi, Nazim Hikmet Cad. Selin Apt, 4/17, Canakkale/TURKEY
E-mail: fatmabeyazit@yahoo.com
Phone: 90+2862171098
Fax: 90+2862133622

Case Report

A 28-year-old woman gravid 28th week of gestation was admitted to our hospital because of premature contraction of uterus. She had a successful in vitro fertilization and embryo transfer, and the course of the pregnancy was uneventful. All the vital signs and laboratory examinations were normal. She was also feeling the fetal movements well. Speculum examination revealed no signs of premature rupture of membranes or vaginal bleeding with a closed cervical os. Sonographic evaluation of fetus was normal in regard to fetal growth regarding gestational age. The amniotic fluid index was 120 cm. The placenta was located in the anterior uterine wall and a 4,5x4 cm well defined echogenic mass in the placenta was observed. Color-Doppler examination revealed substantial vascularity of the mass, suggestive of chorioangioma. Fetal echocardiography was normal other than ventricular septal defect. There was no evidence of fetal circulation impairment and we decided to monitor the patient with prenatal and USG follow-up every 15 days, in the Division of Maternal and Fetal Medicine of our university hospital.

Although in the following exams with USG revealed an increase in the size of the mass, in one point the enlargement of the mass was stopped and persisted throughout the pregnancy. Figure 1 shows USG appearance of chorioangioma with a diameter of 51x56

mm at gestation week 35. Doppler scan findings was not changed during the rest of pregnancy. At 38+3 weeks of gestation the patient began having lower abdominal contractions and hospitalized. The patient had a cesarean delivery at 38+4 weeks, giving birth to a male newborn weighing 2900 grams without any perinatal complications. The Apgar score was 9 and 10 in the 1st and 5th minute, respectively. Macroscobic examination of the placenta showed a mass with a diameter of 5,5 cm and was located near to the three-vessel umblical cord (Figure 2). The histopathological examination of the placenta revealed proliferation of different sized vessels surrounded by connective tissue stroma (Figure 3).

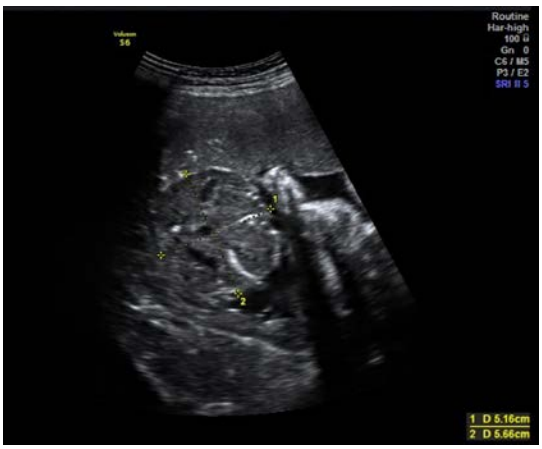

Figure 1. Sonographic appearance of chorioangioma at gestation week 35.

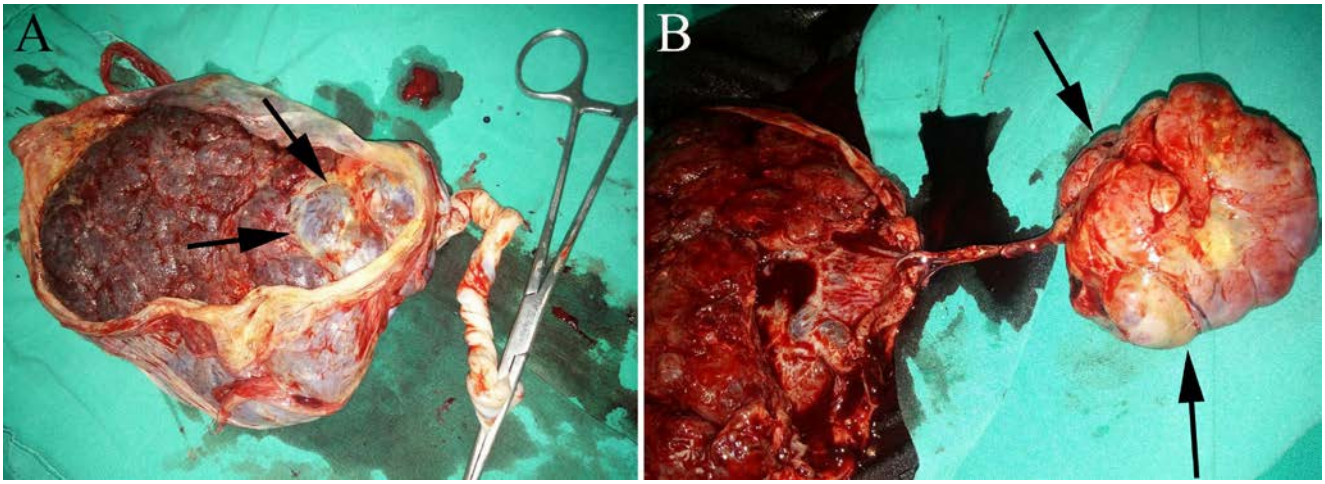

Figure 2. Macroscopic appearance of chorioangioma attached to the fetal surface of the placenta (A), lesion detached from placental tissue (B).

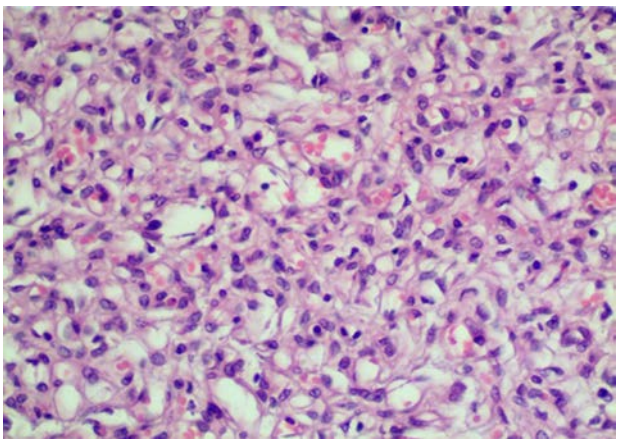

Figure 3. Histologic examination demonstrating proliferation of different sized vessels surrounded by connective tissue stroma. (H&E x 400)

Discussion

In this report, we have successfully presented a giant chorioangioma case with favourable evolution during the prenatal period with the birth of a full-term newborn without any serious complications. Although small chorioangiomas are not rarely seen, giant chorioangiomas are relatively rare disorders and due to increased fetal and maternal morbidity and mortality rates a totally favourable evolution and outcome is rarely reported as in our case. Moreover, in conjunction with current data, the diagnosis of our patient was done with USG and color doppler examination during the second trimester of gestation (24 weeks) and the diamater of the chorioangioma detected in our patient was 5 cm.

Chorioangomas are the most common non-trophoblastic benign tumors of the placenta, occuring in approximately 1% of all pregnancies or in 0.5-1% of all placentas examined at delivery. They are vascular originated tumors with the majority being single, encapsulated and intraplacental. Depending on their small size, it is very difficult to detect chorioangiomas during macroscopic examination of the placenta, unless the placenta is very carefully sectioned for pathologic examination [7]. Large or giant chorioangiomas are often defined as a diameter of detected mass greater than 4 or 5 cm and have an incidence varying from 1:500 to 1:16,000 placentas examined. It is easier to detect larger chorioangiomas prenatally by USG and/or doppler imaging or on routine pathologic examination [2,3]. In our case, chorioangioma diagnosis was initially done by USG and doppler at the 24th week of gestation. Moreover, the diagnosis was confirmed with pathologic examination of the placenta after delivery.

In a recent paper by Caldas and colleagues [8], an 18-year-old patient was described as having a giant

chorioangioma (>4cm) and was reported to have a favourable evolution during the prenatal period. The patient had a caesarean delivery at 38 weeks of gestation with the birth of a live newborn without any complications. A favorable outcome was also reported by Fan and Mootabar [9] in a 28-year-od primigravida that had a giant placental chorioangioma with an over 10 cm well-circumscribed echogenic mass. In this case report an intensive prenatal surveillance was also reported to be scheduled until the delivery at 37 weeks by cesarean section. Although in our case we also did not observe any serious maternal or fetal complication during the follow-up, it should be kept in mind that chorioangiomas are proven to be associated with unfavourable effects on the mother and necessitate strict follow-up of the mother and the fetus.

Chorioangiomas are associated with an increased frequency of obstetrical complications and poor perinatal outcomes [10,11]. The major fetal risks associated with chorioangiomas are non-immune hydrops, cardiomegaly, congestive cardiac failure, prematurity and sudden infant death [12-15]. These complications are mainly explained by the existence of shunts and bleeding between maternal and fetal circulation, microangiopathic hemolysis, as well as placental insufficiency caused by the growth of the tumor [7,8]. In a study by Zanardini et al. [7], 19 giant placental chorioangioma cases were retrospectively analysed. It was found that the presence of a large placental chorioangioma is associated with fetal growth restriction and a hyperdynamic state in most patients. We did not observe any of these complications in our patient during follow-up. Although our patient had a caeserean delivery, it should be noted that large placental chorioangiomas may also cause obstructed vaginal deliveries.

In conclusion, plasental choriangiomas are associated with an increased risk of pregnancy complications. As this disease is associated with unfavorable effects to both mother and to fetus, close monitoring with USG, color doppler and fetal echocardiographic studies are recommended, even in those cases with no associated complications at the time of the diagnosis.

References

1. Wou K, Chen MF, Mallozzi A, Brown RN, Shrim A. Pregnancy outcomes and ultrasonographic diagnosis in patients with histologically-proven placental chorioangioma. Placenta. 2011;32(9):671-4.
2. Guschmann M, Henrich W, Dudenhausen JW. Chorioangiomas--new insights into a well-known problem. II. An immuno-histochemical investigation of 136 cases. J Perinat Med. 2003;31(2):170-5.
3. Zalel Y, Weisz B, Gamzu R, Schiff E, Shalmon B, Achiron R. Chorioangiomas of the placenta: sonographic and Doppler flow characteristics. J Ultrasound Med. 2002;21(8):909-13.
4. Shetty SK, Kamath R. Chorioangioma of placenta. In J Biomed Res. 2013;4(6):289-91.
5. Shalev E, Weiner E, Feldman E, Zuckerman HK.Prenatal diagnosis of placental hemangioma--clinical implication: a case report. Int J Gynaecol Obstet. 1984;22(4):291-3.
6. Subramanian S, Taori KB, Anand A, Chhadi S, Bakde A, Gour PG, Disawal A. Rare case of giant chorioangioma and review of literature. Asian Pac J Health Sci. 2015;2(4):4-6.
7. Zanardini C, Papageorghiou A, Bhide A, Thilaganathan B. Giant placental chorioangioma: natural history and pregnancy outcome. Ultrasound Obstet Gynecol. 2010;35(3):332-6.
8. Caldas RT, Peixoto AB, Paschoini MC, Adad SJ, Souza ML, Araujo Júnior E. Giant placental chorioangioma with favorable outcome: a case report and literature review of literature. Ceska Gynekol. 2015;80(2):140-3.
9. Fan M, Mootabar H. A rare giant placental chorioangioma with favorable outcome: A case report andreview of the literature. J Clin Ultrasound. 2014;4:254-6.
10. Sethi SK, Hemal U, Solanki RS, Bhagra A. Chorioangioma of placenta:A case report. 2004;14(1):65-6.
11. Sepulveda W, Alcalde JL, Schnapp C, Bravo M. Perinatal outcome after prenatal diagnosis of placental chorioangioma. Obstet Gynecol. 2003;102(5 Pt 1):1028-33.
12. Dhar H. Giant placental chorioangioma with intrauterine fetal death. JNMA J Nepal Med Assoc. 2013;52(190):384-7.
13. .García-Díaz L, Carreto P, Costa-Pereira S, Antiñolo GPrenatal management and perinatal outcome in giant placental chorioangioma complicated with hydrops fetalis, fetal anemia and maternal mirror syndrome. BMC Pregnancy Childbirth. 2012;12:72.
14. Jhun KM, Nassar P, Chen TS, Sardesai S, Chmait RH. Giant chorioangioma treated in utero via laser of feeding vessels with subsequent development of multifocal infantile hemangiomas. Fetal Pediatr Pathol. 2015;34(1):1-8.
15. Barros A, Freitas AC, Cabral AJ, Camacho MC, Costa E, Leitão H, Nunes JLGiant placental chorioangioma: a rare cause of fetal hydrops. BMJ Case Rep. 2011;2011.