

# Subchorionic Hematoma Associated with Preeclampsia and Fetal Distress: Case Report

Ali Özler<sup>1</sup>, Can Postacı<sup>1</sup>, Yeşim Baytur<sup>1</sup>, Semra Oruç Koltan<sup>1</sup>, Nalan Neşe<sup>2</sup>

<sup>1</sup>Celal Bayar Üniversitesi, Kadın Hastalıkları ve Doğum Anabilim Dalı, Manisa, TR

<sup>2</sup>Celal Bayar Üniversitesi, Patoloji Anabilim Dalı, Manisa, TR

## Abstract

**Objective:** In this case report; we present a patient of 26 weeks pregnancy with a prominent subchorionic hematoma and discuss the differential diagnosis of placental masses with respect to the related literature.

**Case:** Twenty years old, 26 weeks pregnant patient, referred to our clinic with the presumptive diagnosis of PPRM (preterm premature rupture of the membranes), ablatio placentae and IUGR (intrauterine growth restriction) was evaluated. Doppler ultrasonography revealed; a hypochoic mass lesion with a diameter of 5 cm in the placenta compatible with hematoma. The diagnosis subchorionic hematoma, was established by means of 3D sonography and clinical findings. Worsening of fetal and maternal wellbeing led to the early delivery. Histopathological examination of the placenta verified the subchorionic hematoma.

**Conclusion:** Differential diagnosis of subchorionic hematoma from ablatio placenta and chorioangioma should be made, because of the differences in the clinical followup and management. Doppler, 3D sonography and MRI are the main diagnostic tools. Worsening of the fetal or maternal wellbeing should prompt immediate delivery.

**Keywords:** Subchorionic hematoma, ablatio placentae, chorioangioma.

## *Preeklampsi ve fetal distres ile ilişkili subkoryonik hematom: olgu sunumu*

**Amaç:** 26. gebelik haftasında geniş subkoryonik hematom olgusunu ve plasental kitlelere tanısız ve klinik yaklaşımla ilgili literatür bilgisi sunmak.

**Olgu:** Ablasyo plasenta, erken membran rüptürü ve gelişme kısıtlanması ön tanılıyla refere edilen 20 yaşında SAT 'e göre 26 hafta G1P0 olgu değerlendirildi. Yapılan Doppler ultrasonografide plasenta içinde 5 cm çapında hipoeoik hematom ile uyumlu kitlede kan akımı tespit edilmedi. Üç boyutlu ultrasonografi ve klinik bulgularla Subkoryonik Hematom tanısı kondu. Fetal ve maternal durumda kötüleşme nedeniyle gebelik 27. haftada sonlandırıldı. Doğum sonrası tanı plasentanın patolojik incelemesiyle doğrulandı.

**Sonuç:** Subkoryonik hematomunun klinik izlem ve tedavide farklılıklar göstermesi nedeniyle Ablasyo plasenta ve koryoanjiomadan ayırıcı tanısı mutlaka yapılmalıdır. Doppler ve üç boyutlu ultrasonografi ve MRG tanıya ulaşmada önemlidir. Subkoryonik hematom olgularında fatal distres ve maternal durumda kötüleşme söz konusu olduğunda doğum gerçekleştirilmelidir.

**Anahtar Sözcükler:** Subkoryonik hematom, ablasyo plasenta, koryoanjioma.

## Introduction

Our aim is to present wide subchorionic hematoma case at 26th gestational week and its literature information associated with diagnostic and clinical approach towards placental masses.

## Cases

Twenty-years-old case with 26th week G1P0 according to SAT was referred with the pre-diagnoses of ablatio placenta, early membrane rupture and growth retardation. Her blood

pleasure was measured as 180/110 mmHg at our polyclinic. It was seen in vaginal speculum examination that there was no amnion fluid broke. In the routine urine examination, protein 4 was found positive, protein within urine of 24 hours was 12 gr, ALT was 46 U/L and LDH was 289. In the abdominal ultrasonography performed by Voluson 730 Expert, C was found below 5% in the biometric measurements of fetus while it was between 5% and 25% in other measurements. Three hypochoic solid masses were observed within placenta near the umbilical artery entrance with 5 cm diameter maxi-

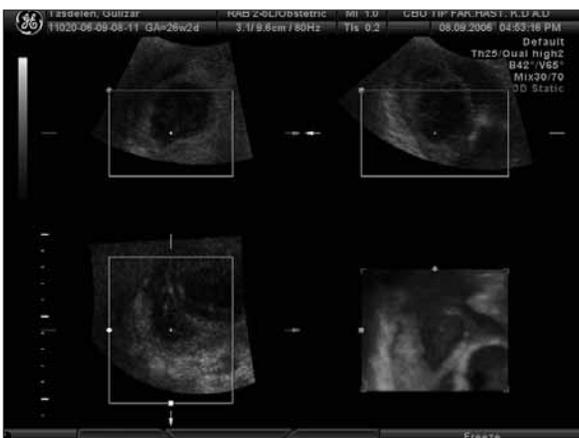
mum (Figure 1). No flow was detected in the mass by Doppler ultrasonography (Figure 2). Three-dimensional ultrasonographic examinations were done on masses (Figure 3). The patient was hospitalized by pre-diagnoses of subchorionic thrombohematoma, chorioangioma and preeclampsia. Blurred vision developed in the clinical follow-ups of the patient. The delivery was performed at 48th hour after applying corticosteroid upon the non-reactive progress of NST, decrease of thrombocyte counts and increase of ALT. A living 590g male baby was delivered by cesarean and the baby



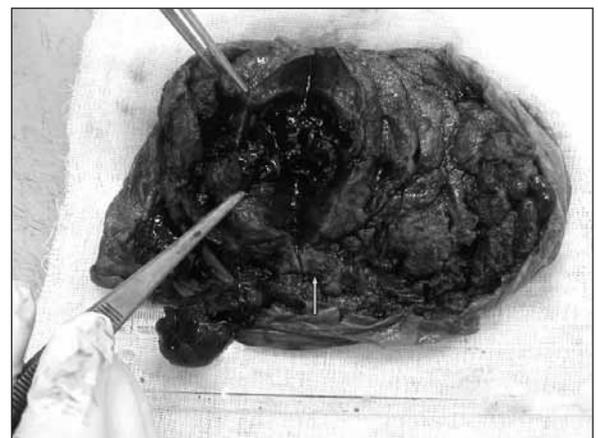
**Figure 1.** Hypochoic mass within placenta.



**Figure 2.** No flow was detected in the Doppler examination performed on the mass.



**Figure 3.** Three dimensional views of masses.



**Figure 4.** Intraplacental hematoma (thick arrow) and adjacent infarction areas (thin arrows).

was taken into newborn care unit. After delivery, a 7x5x3 cm intraplacental located hematoma with lobule contour was seen at macroscopic examination of placenta as well as numerous pale yellow - light brown colored infarction areas (Figure 4). Hematoma blood elements and mixed fibrin mass were used in microscopic examination of placenta. Ghost villi structures where their nuclei cannot be seen within infarction areas and characterized necrosis areas caught attention. Calcification focuses were seen both in necrosis areas and around hematoma.

## Discussion

Subchorionic hematoma was first named as Breus's Mole by Breus in 1982 and it can be defined as massive maternal bleeding which separates chorionic villi from chorionic plate.<sup>1</sup> It is associated with serious gestational complications such as intrauterine growth retardation, fetal distress and fetal death.<sup>2</sup> Thrombolytic treatment in the development of subchorionic hematoma<sup>3,4</sup> was reported as the risk factor for advanced maternal age and chronic hypertension.<sup>1</sup> Also other placental masses and especially chorioangiomas should certainly be considered. Our most important tool for definitive diagnosis of masses within placenta is Doppler ultrasonography.

Sepulveda et al. evaluated seven pregnant by Doppler ultrasonography who had placental masses and pre-diagnosis of chorioangioma was confirmed in the pathological examination of four cases on whom flow was detected. 2 out of 3 cases on whom no flow was detected were found as having subchorionic thrombohematoma and one of them having subamniotic hematoma.<sup>5</sup> While hydrops and polyhydramnios development in fetus and blood flow within the mass makes us to think chorioangioma, like in our case, non-existence of blood flow within the mass, growth retardation, abnormal Doppler findings and accompanying oligohy-

dramnios are the signs of subchorionic hematoma. However, growth retardation may also exist in chorioangiomas. In the 9 years of series of Prapas, seven cases were diagnosed as chorioangioma by histopathological examination and polyhydramnios was seen in six of these cases while intrauterine growth retardation was seen in two of them.<sup>6</sup> Although these masses can be easily detected by two-dimensional Doppler ultrasonography, three-dimensional ultrasonography can contribute to accurate diagnosis.<sup>7</sup> Moreover, it was reported that MR may contribute to the diagnoses in cases which cannot be certainly diagnosed and that MR may recognize placental bleedings (retroplacental hematoma, intervillous thrombus, subchorionic hematoma) and ischemic lesions.<sup>8,9</sup> The diagnosis was performed by two-dimensional ultrasonography and Doppler in our case and also three-dimensional ultrasonography was used. MR utilization was not considered as necessary for diagnosis.

In small and asymptomatic subchorionic hematoma cases, pregnancy complications and bad perinatal results are not expected and follow-up can be performed.<sup>5</sup> However, if a large mass or bleeding is in question which may significantly decrease the nourishment and oxygenation of fetus, growth retardation and fetal death may occur. As growth rate of placental masses are not known clearly, a close follow-up is significant. In a publication, it was reported that preterm labor occurred in 6 cases with chorioangioma and neonatal death in one case associated with rapid growth of tumor.<sup>5</sup> When reported cases were evaluated, it should be remembered that premature early membranous rupture, antenatal bleeding and intrauterine fetal death may occur in subchorionic hematoma cases.<sup>10</sup> Therefore, these cases should be followed up closely by Doppler ultrasonography and other fetal wellness tests. As in our case, delivery should be performed immediately when fetal distress in question. Asymptomatic cases far from term can be fol-

lowed conservatively as long as close follow-up is performed.

## Conclusion

Since clinical approach and treatment options differ in the differential diagnosis of subchorionic hematoma, chorioangiomas and ablatio placenta should certainly be considered. When reported cases are evaluated, it should be remembered that premature early membranous rupture, antenatal bleeding and intrauterine fetal death may occur in subchorionic hematoma cases. As in our case, delivery should be performed immediately when fetal distress in question. Asymptomatic cases far from term can be followed conservatively as long as close follow-up is performed.

## References

1. Fisteag-Kiprono L, Foster K, McKenna D, Baptista M. Antenatal sonographic diagnosis of massive subchorionic hematoma: a case report. *J Reprod Med* 2005; 50: 219-21.
2. Richards DS, Bennett BB. Prenatal ultrasound diagnosis of massive subchorionic thrombohematoma. *Ultrasound Obstet Gynecol* 1998; 11: 364-6.
3. Usta IM, Abdallah M, El-Hajj M, Nassar AH. Massive subchorionic hematomas following thrombolytic therapy in pregnancy. *Obstet Gynecol* 2004; 103: 1079-82.
4. Lee RH, Goodwin TM. Massive subchorionic hematoma associated with enoxaparin. *Obstet Gynecol* 2006; 108: 787-9.
5. Sepulveda W, Aviles G, Carstens E, Corral E, Perez N. Prenatal diagnosis of solid placental masses: the value of color flow imaging. *Ultrasound Obstet Gynecol* 2000; 16: 554-8.
6. Liang RI, Hunter D, Copel JA, Lu LC, Pazkash V, Mari G. Color Doppler imaging of placental masses: differential diagnosis and fetal outcome. *Ultrasound Obstet Gynecol* 2000; 16: 559-63.
7. Hata T, Kanenishi K, Inubashiri E, Tanaka H, Senoh D. Three-dimensional sonographic features of placental abnormalities. *Gynecol Obstet Invest* 2004; 57: 61-5.
8. Linduska N, Dekan S, Messerschmidt A, Kasprian G, Brugger PC. Placental pathologies in fetal MRI with pathohistological correlation. *Placenta* 2009; 30: 555-9.
9. Kojima K, Suzuki Y, Makino A, Murakami I, Suzumori K. A Case of massive subchorionic thrombohematoma diagnosed by ultrasonography and magnetic resonance imaging. *Fetal Diagn Ther* 2001; 16: 57-60.
10. Loi K, Tan KT. Massive pre-placental and subchorionic haemetoma. *Singapore Med J* 2006; 47: 1084-6.