

*Case Report*

Subchorionic Thrombohematoma with Placentomegaly Resulting In Fetal Death - A Case Report

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*Received: 17/06/2015**Revised: 08/07/2015**Accepted: 14/07/2015*

ABSTRACT

Thrombohematoma confined to the subchorionic space is usually associated with perinatal complications; however many cases of favourable pregnancy outcome have been reported. Precise etiology is yet to be established. Ultrasonography of placenta can establish the diagnosis and may be useful in determining the perinatal prognosis. We describe a case of subchorionic thrombohematoma in a 24 years old primi lady who presented with bleeding per vaginum and resulted in intrauterine fetal death.

Key words: hematoma, fetal death, subchorionic

INTRODUCTION

Subchorionic thrombohematoma (STH) is a distinct form of hematoma where thrombus is confined to the subchorionic space, however it may extend and dissect the chorionic plate. Mostly thrombus is more than 1 cm thick. ⁽¹⁾ This condition may be associated with perinatal abnormalities like oligohydramnios, fetal growth retardation, preterm labor and even fetal death. ^(2,3) The possible etiologies described in literature include uteroplacental circulatory insufficiency or stasis of maternal blood in the subchorionic space leading to thrombus formation. ^(1,2,3) Antenatal ultrasound of placenta can establish the diagnosis and may be used in determining the perinatal prognosis. Literature review documents many cases where STH had a favourable pregnancy outcome and even complete resolution of the thrombus. ⁽⁴⁾

CASE REPORT

24 year old, primi gravida with 22+ weeks of gestation was referred with complaints of bleeding per vaginum and abdominal pain for one day. She had undergone regular antenatal checkup. Anomaly scan done at 21+ weeks showed thick placenta. There was no other anomaly seen. She had no significant past medical or family history. There were no prior clinical risk factors for placental insufficiency documented. For the present complaints, repeat scan done at the peripheral hospital showed fundic and right laterally placed placenta measuring 14x12.2x6 cms, diffusely and grossly thickened. Another small lobe of thickened placenta covering the internal os was seen. Abnormal uterine artery flow was noted. Possibility of intra uterine growth retardation was suggested. After referral to our hospital patient's complete hematologic and biochemical

investigations were done. She had hemoglobin of 10.6gm%. TORCH profile and fetal echo were advised. Transabdominal ultrasound scan revealed diffusely hypoechoic enlarged placenta with minimal ascites, small retroplacental clot and absent cardiac activity. Patient was planned for induced abortion and expelled a still born male baby weighing 300 gms. A retroplacental clot of 50 gm was seen. On histopathology examination, grossly enlarged placenta with attached cord weighing 174 gm and measuring 15x10x3 cm was received. It showed a hemorrhagic area measuring 7x6 cms in the subchorionic space (Figure 1, 2). The hemorrhage did not extend beneath the insertion of the umbilical cord. Microscopy revealed chorionic villi and membranes overlying large subchorionic hemorrhagic areas (Figure 3, 4) surrounded by areas of placental infarct, ghost villi, foci of calcification and fibrin. A diagnosis of subchorionic thrombohematoma was given.



Figure 1 - Grossly enlarged placenta with attached cord.

DISCUSSION

STH was first described by Breus in the year 1882 as Breus' mole. (5) It should be differentiated from other forms of uterine hematoma which include subamniotic, retroplacental and marginal hematomas based on clinical features, ultrasonography and pathologic examination. (1) Incidence of

STH reported in pregnancy is variable and ranges from 4-48% (1,6,7) Shanklin et al, (8) in the largest series done on STH examined 19,000 placentas and concluded that the incidence of massive STH was 1 in 2,000 pregnancies. The possible explanation of this wide range of incidence could be different study populations, study designs, patients of different gestational ages, and most importantly lack of a standard definition of STH. Some authors base the incidence on the total number of deliveries where as others take into account the total number of placentas examined, (1) perhaps explaining the reasons of such variability in the incidence range.



Figure 2 - Hemorrhagic area measuring 7x6 cms in the subchorionic space.

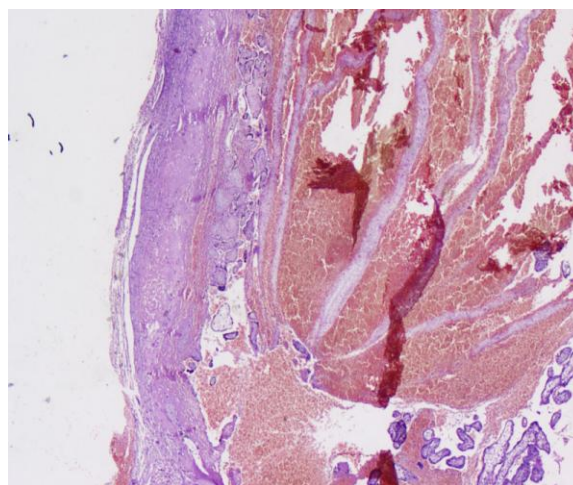


Figure 3 - Chorionic villi and membranes overlying large subchorionic hemorrhagic areas, H&E x20.

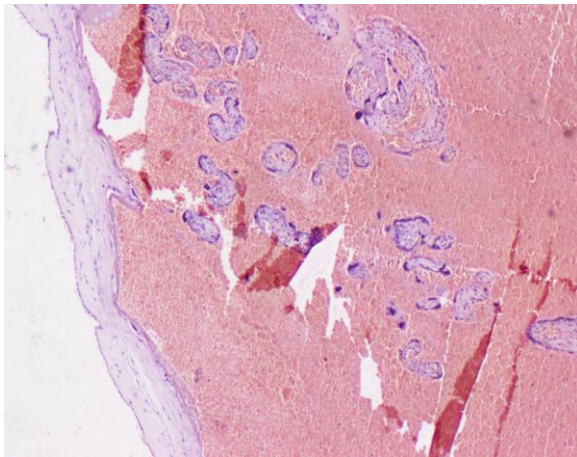


Figure 4 - Chorionic villi and membranes overlying large subchorionic hemorrhagic areas, H&E X40.

The precise etiology of STH is yet to be established, although authors have suggested different hypothesis. Possible association with maternal coagulation disorders was suggested as the DNA analysis showed that 85% of the blood in the thrombus was of maternal origin. ⁽¹⁾ This condition was more documented in females who were on anticoagulants or following thrombolytic therapy, which further substantiated this theory. Fetal villous hemorrhage or obstruction and subsequent accumulation of blood with separation of the chorionic plate have also been proposed. ⁽¹⁾ A possibility of uteroplacental vascular pathology responsible for these hemorrhages was also suggested. ⁽⁴⁾ Nulliparity was found to be associated with idiopathic STH in patients without any pre-existing risk factors. According to Lindqvist et al ⁽⁹⁾ nulliparity was the most significant risk factor for antepartum thromboembolic events. Higher circulating levels of estrogen in these cases could possibly be the reason. ⁽¹⁾ Baxi et al ⁽¹⁰⁾ have suggested presence of antibodies as the likely cause of hematoma formation and recommended that all patients of STH must be evaluated for antibody screen regardless of the prior obstetric history. A mechanism of redistribution in the fetoplacental circulation has been proposed. This has also been reported by Fuse et al ⁽²⁾ in a case of monochorionic-

diamniotic twin pregnancy which was complicated by STH and had led to fetal circulatory changes in both the twins. Most of patients of STH present with vaginal bleeding, abdominal pain and distension.

On ultrasound, STH appears as a heterogeneous, homogenous or hypoechogenic mass in the chorion which appears different from normal texture of the placental tissue. Rarely, placentomegaly may be associated which is considered as a bad prognostic sign ⁽¹⁾ which was noted in our case as well. STH may or may not extend beneath the umbilical cord. In cases where it extends beneath the cord, chances of uteroplacental vascular compromise increases. Hence, on ultrasound one should examine the insertion of the umbilical cord in all cases of STH, ⁽³⁾ thus making placental evaluation useful in determining the prognosis in cases with STH. ⁽⁴⁾ According to Fung et al, ⁽¹⁾ around 40% of the pregnancies result in poor outcome in form of either fetal or neonatal death. It is found that the fetal loss risk remains high even if an antenatal diagnosis of STH is made. The presence of a STH in the first and early second trimester increase the risk of adverse perinatal outcome including abortion, stillbirth, abruptio placenta, intra uterine growth retardation and preterm labor. ⁽⁶⁾ The mechanism explained for intrauterine growth retardation could be uteroplacental insufficiency secondary to the compression of the umbilical cord insertion by the thrombus. ⁽¹⁾ However, around 18% cases of threatened miscarriage with STH, have no effect on the outcome of the pregnancy. It has been reported that a hematoma greater than 60 ml in the first trimester was associated with poor fetal outcome. ⁽¹¹⁾ The issue is controversial as the size of the hematoma changes during the course of pregnancy. There have been reports of gradual decrease in the size of STH ⁽¹⁾ and even of complete resolution. ⁽⁶⁾ Also, change in the hematoma size did not correlate with

prognosis as females with a decreasing hematoma size may still result in a sudden fetal death or stillbirth. ⁽¹⁾ However, reports of good perinatal outcome with careful surveillance of maternal and fetal condition in these patients have been documented. ⁽⁶⁾ Asada et al ⁽¹²⁾ reported a case of primiparous female where ultrasound revealed a subchorionic placental mass of 91×57mm at 27 weeks of pregnancy. On caesarian section, a large thrombohematoma was noted and was confirmed to be STH by histological examination. The baby weighed 471g and has been growing well without neurological or respiratory defects. Hence, possibility of infants' survival exists. Tocolysis and antibiotics are usually given as a part of management of STH as these cases may result in abortion or premature delivery associated with chorioamnionitis. ⁽³⁾

In this case report we emphasize on the early diagnosis of STH, although the size of hematoma may change during the course of pregnancy. Cases associated with placentomegaly are considered to have bad prognosis. We also recommend histopathological evaluation of the placenta for confirmation of the diagnosis.

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How to cite this article: Sharma S, Rao ACK, Jain N. Subchorionic thrombohematoma with placentomegaly resulting in fetal death - a case report. *Int J Health Sci Res.* 2015; 5(8):675-678.
