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A rare case of Intraplental hematoma: Case report

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Abstract

The intraplental hematomas are rare. The terms as Rounded Intraplental Hematoma (RIH) and placental infarction hematoma have been used to describe them. Such hematomas are associated with preeclampsia and adverse changes in fetoplacental perfusion resulting in poor perinatal outcome. We present a case of intraplental hematoma with severe preeclampsia and visual disturbances with good neonatal outcome.

Keywords: Intraplental hematoma, placental infarction hematoma, rounded infarction hematoma, fetoplacental perfusion, preeclampsia

Introduction

The various types of hematomas associated with pregnancy are retroplacental, subchorionic, intraplental and subamniotic. These are also known as intrauterine hematomas. The retroplacental and subchorionic hematomas are common in occurrence and have been well described in literature. The intraplental hematoma is infrequent in occurrence and rarely written about. The histopathological features of intraplental hematoma includes haemorrhagic area in placental parenchyma associated with microangiopathy^[1]. The intraplental hematomas are located in the intervillous cavity of placenta. We present a case of intraplental hematoma with severe preeclampsia and visual disturbances with good neonatal outcome.

Case Report

A 29-year-old, primigravida at 31 weeks of gestation admitted with complaints of giddiness for 2 hours, increased pedal edema for 3 days. She was a booked patient with previous normal BP records. She had normal thyroid function and oral glucose challenge tests. Her TIFFA scan at 20 weeks was normal and showed no gross anomaly. On examination, blood pressure was 140/110mmhg and per abdomen revealed fundal height corresponding to 30 weeks, cephalic presentation, liquor appeared normal, fetal heart rate 140 beats/min regular, uterus was non-tense and non-tender. Ultrasonography with Doppler flow velocimetry was suggestive of single live fetus of 30 weeks gestation with estimated fetal weight 1390 grams with adequate liquor. The placenta was bulky with large hypoechoic area that appeared to be old organised intraplental hematoma devoid of blood vessels. There was no fresh hematoma or any retroplacental haemorrhage. Doppler was suggestive of high resistant umbilical arterial blood flow because of high intraplental resistance.

	Close to fetus	Close to placenta
RI	0.64	0.88
PI	1.15	2.11

Her blood investigations, haemoglobin 11.9 gm%, platelet count 1.5 lac/mm³, creatinine 0.7mg/dl, INR 1.0, Uric acid 5.6mg/dl, AST 31U/L, ALT 16 U/L. Urine albumin was nil. She was started on oral labetalol 200mg thrice daily and oral nifedipine 20mg twice daily. She was given injection dexamethasone for fetal lung maturity and magnesium sulphate for neuroprotection. She was kept on fetomaternal surveillance. Her antiphospholipid antibody and anticardiolipin antigen (APLA, ACLA) came out negative. She was found immune for toxoplasmosis and cytomegalovirus.

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At 32 weeks of gestation, patient complained of decreased fetal movements with fetal heart varying between 110 beats/min to 120beats/min. An emergency c –section was done and a live male baby of 1370grams with Apgar score of 8 at 1 min and 10 at 5 min was delivered. The baby was transferred to NICU.



Fig 1: Ultrasound Image: Showing intraplacental hematoma

Placental Pathology

The Placenta weighed 525 grams at 32 weeks gestation. It was extremely bulky, measuring 13x11x5cm. There was no retroplacental clot. There were large defects showing old clots in the placental tissue. Umbilical cord had three vessels. On Histopathological examination, there was fibrin deposition in intervillous space, hypoplastic tertiary chorionic villi and large area of intraplacental hematoma and necrotic chorionic villi. No evidence of granuloma or malignancy seen.



Fig 2: Gross picture: Showing bulky placenta,



Fig 3: Gross picture: Large defects in placental tissue with measuring 13x11x5cm. organised clot.

On postoperative day 2, patient developed blurring of vision. Ophthalmic examination revealed macular edema, she was given mannitol and NSAIDs eye drops. Her vision improved by postoperative day 4. Rest of the postoperative course was normal and she was discharged on day 7. The baby was discharged after 3 weeks of NICU stay.

Discussion

The incidence of hematomas in the first trimester is 4-22% [2]. Hematomas occurring during pregnancy are associated with higher rate of miscarriage, preeclampsia, preterm delivery, intrauterine growth restriction and intrauterine fetal demise [3, 4]. The retroplacental hematomas are the most frequent and well-studied. Intraplacental hematomas are rare and therefore finds lesser mention in literature.

The pathophysiology of placental infarction hematoma or placental infarct is occlusion of spiral arteries by thrombus, strangulation of placental villi due to increased perivillous or intervillous fibrin deposition and impairment of fetal circulation due to fetal thrombotic vasculopathy [5, 6, 7, 8, 9].

The infarcts involving more than 5% of placenta can be observed in 39% of patients with severe preeclampsia [10]. Other possible etiologies include thrombophilias, antiphospholipid antibody syndrome and Disseminated intravascular coagulation [1]. Intraplacental hematomas may sometimes cause non-immune hydrops fetalis due to fetomaternal haemorrhage [11].

Sonographic images associated with placental lesions include cystic areas, heterogenous appearance of placental mass, thick or thin placentas [12, 13, 14, 15]. A well-defined rounded cystic area in placenta referred as rounded intraplacental hematoma (RIH) is associated with higher risk of preeclampsia and intrauterine growth restriction [16]. The presence of hypoechogenic images with a regular shape with a hyperechogenic rim and the lack of demonstrable blood flow, suggests the presence of placental pathology and placental infarction hematoma [17].

The intraplacental hematomas are associated with preeclampsia,

intrauterine growth restriction, intrauterine fetal demise and abnormal neurodevelopment in surviving babies^[18, 19]. MRI may improve the diagnosis of placental lesions^[20]. There are no specific treatment guidelines for patients with intraplacental hematomas. Low molecular weight heparin (LMWH) and aspirin have been proposed when placental infarcts are observed on ultrasound scan^[21]. Timely delivery is the best treatment option at present.

Conclusion

Pregnancies with intraplacental hematomas are at significant risk of adverse fetomaternal outcome. Detailed sonographic evaluation of placenta during antenatal period is the key to diagnosis. Timely intervention can result in good maternal and perinatal outcome.

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