



PLACENTAL CHORANGIOSIS WITH CHORANGIOMA – A RARE CASE REPORT

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ABSTRACT

Placental tissue vascularity is relied on multiple factors of which fetomaternal hypoxia plays cardinal role. Placental chorangiomas arise from chorionic tissue and are benign vascular tumors of placenta. Chorangiomas arise due to low-grade placental hypoxia. Within chorionic villi, there is increased number of small sized vascular channels and is related to multiple maternal, foetal and placental disorders. We present a case of Chorangioma with Chorangioma causing intra-uterine foetal death.

KEYWORDS :

INTRODUCTION

Placenta is defined as “Diary of Intra-uterine Life”. It reflects multiple facets of foetal development⁽⁶⁾. Placenta being highly vascular, it has intricate and tightly arranged vessels derived from mother and foetus⁽⁶⁾. Multiple growth factors triggers vasculogenesis and angiogenesis in molecular microenvironment. Any imbalance in haemodynamics can affect growth of foetus and placenta each⁽⁶⁾.

Chorangioma is uncommon tumor of placenta with 1% incidence⁽²⁾. They are generally found in primiparae and twin pregnancies and seen often in combination with hypertension and diabetes mellitus.

Chorangioma is hypoxia related angiogenesis causing hypervascular terminal chorionic villi without stromal hypercellularity. It is related with multiple maternal, placental and foetal disorders. It accounts for 39% of congenital malformations and 42% of mortality⁽²⁾. We present a case with placental chorangioma with chorangioma causing intra-uterine foetal death.

CASE REPORT

G₂P₁L₁, presented at 34 weeks of gestation with foetal distress. Patient was stable with normal vitals, BP of 130/80 and normal blood sugar levels. On ultrasonography, placenta was located on anterior wall. A well-defined echogenic mass measuring 10cms x 8cms observed bulging on foetal side. Mass was located on one site of placenta, separated from rest of it. Patient went in spontaneous preterm labour and intra-uterine foetal death took place.

Grossly, weight of placenta was 1.8kg and measured 24cms x 15cms x 8cms with umbilical cord attached in the centre. A solitary firm mass measuring 8cms x 5cms x 4cms seen located on maternal side adjacent to umbilical cord. Cut surface is reddish brown firm areas (Figure 1). Umbilical cord had 3 vessels intact. Membranes too were intact.

Microscopically, Haematoxylin and Eosin stained slides show multiple small capillaries proliferating with occasional large-sized vascular spaces. Also seen are focal areas of calcification. Multiple sections from different sites of normal placenta revealed capillary sized vascular channels which were increased with 10-12/villi in 10 different regions and diagnosed as Chorangioma with Chorangioma (Figure 2,3).



Figure1: Cut surface of placenta showing congested reddish-brown firm mass on maternal surface.

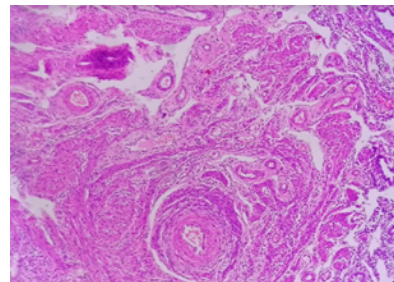


Figure 2. Chorangioma shows multiple capillary-sized channels with few large-sized vascular spaces.

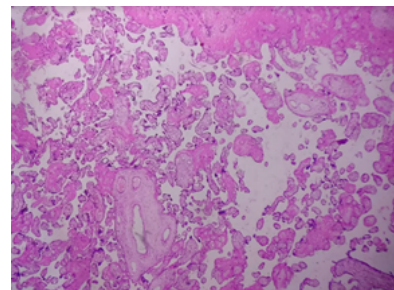


Figure 3: Chorangioma showing increased number of capillary-sized channels per villi.

DISCUSSION

Placental-chorangioma, Chorangiomas and Chorangioma are in general three interrelated vascular lesions, of which Chorangioma is most common followed by Chorangiomas⁽²⁾.

Chorangioma is non-trophoblastic tumor affecting placental parenchyma and presented with abnormal vascular development in it. It is benign angioma arising from chorionic tissue. Rather than true neoplasia they are considered as placental hamartomas⁽¹¹⁾. It usually occurs in third trimester of pregnancy and to lesser extent in second trimester. Chorangioma's clinical significance is size dependent. Clinically significant chorangiomas are multiple or greater than 5cms and correlated with haemorrhage, hydramnios, premature placental separation, premature delivery and placenta previa^(1,7). This may lead to severe foetal distress or even intrauterine death. Neonate can have anaemia, thrombocytopenia or even congestive cardiac failure.⁽³⁾ Therefore, the normal terminal chorionic villi should have less than 5 vascular channels irrespective of vessel present in more than one plane of section^(1,8).

Grossly, it is well-circumscribed with congested cut surface area. Marchetti described three histologic types of Chorangioma as angiomatous, cellular and degenerative type⁽¹²⁾. Angiomatous type is

more common and presents as multiple proliferative blood vessels from capillary to cavernous type in various stages of proliferation. Cellular type has occasional ill-formed vessels with stromal component in predominance. Necrosis, calcification, hyalinization or myxoid changes are seen in degenerative type of chorangiomas⁽²⁾.

Altshuler in 1984 entrenched the diagnostic criteria of Chorangiomas, often called as 'Rule Of 10's' as presence of 10 villi. Each villi with 10 or more vascular channels in 10 or more areas of 3 or more random, non-infarcted placental areas^(3,1). Hypercapillarization is probably due to increase coiling and elongation of terminal villous capillaries⁽¹⁰⁾. Hypoxia related angiogenesis are correlated with multiple foetal, maternal and placental disorders^(1,3,9,10). Chorangiomas should be mentioned in the report and clinically investigated for Diabetes, Anaemia, preeclampsia and Syphilis.

Chorangiomas are capillary vascular lesions affecting larger villous structures with increased stromal collagenisation and cellularity in the background. It involves proximal aspect of villous tree and is seen before 32 weeks of gestation. Chorangiomas too have increased villous capillaries but differs from chorangiomas by having pericytes, affecting stem villi and occurring in placenta less than 32 weeks⁽¹⁾. Chorangiomas usually seen after 37 weeks of gestation, involving tips of villi, multiple capillaries which are closely approximated and intact basement membrane⁽²⁾.

Present case had chorangioma with chorangiomas on maternal surface of placenta further leading to intra-uterine foetal death.

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