CASE REPORT

Chorangiophagus Parasiticus: A Rare Case Report

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Abstract:

Malformations are common in twin pregency compared to singleton pregnancy. One such rare anomaly is *Chorangiophagus parasiticus* also known as twin to twin transfusion which is an asymmetric abnormality of monozygotic twins, where asymmetric twin survive by parasitisizing normal twin. It's a rare condition with an incidence of 1 in 35.000 deliveries. We report such a case with complete autopsy findings.

Key words: *Chorangiophagus parasiticus*, Twin to twin transfusion, foetal autopsy

Introduction:

Chorangiophagus parasiticus is an asymmetric abnormality of monozygotic twins. The asymmetric twin survives by parasitizing more normally developed co-twin by connecting with chorionic circulation hence the name [1]. It is a rare condition occurring with incidence of 1 in 35,000 deliveries, 1 in 100 monozygotic twins and 1 in 30 monozygotic triplets [2]. There are only few such case reports in Indian literature. Hence we present autopsy findings of a case of *Chorangiophagus parasiticus.*

Fig. 1 Gross photograph of the cut section of the whole fetus, showing lower limb and spine.

A 24 year old primi with 30 weeks of gestation was referred to our hospital with complains of loss of fetal movements. She was not a booked case. Ultrasound done showed twin pregnancy with features of IUD. One of the twins was smaller in size and its parts were not made out and polyhydroamnios was seen. With the consent of parents the pregnancy was terminated and twins were sent for autopsy. On examination, the placenta was single, monochrionic monoaminiotic and weighing 500gms. Both the cords were enlarged and the cord of the second twin was attached adjacent to the first cord. On external examination the male fetus was normal and on dissection showed cardiomegaly. The second twin was greenish mass of soft tissue with partially formed lower limb. On dissection, only the spine and few ill formed intestinal coils were seen (Fig 1). With the above features a diagnosis of *Chorangiophagus parasiticus* was made.

Discussion:

Chorangiophagus parasiticus also termed as acardic/acephalic twins or twin with reversed arterial perfusion (TRAP) sequence, is a unique complication of monochorionic twinning. It is characterized by lack of heart development associated with a spectrum of malformations [2]. The structurally abnormal twin survives only if it parasitizes the near normal co twin either by anastomosing at chorionic circulation (*Chorangiophagus parasiticus*) or actually attaching to the co-twin externally (ectoparasite or heteroparasite), or internally (endoparasite or fetus in fetus) [1, 3].

Twins with *Chorangiophagus parasiticus* have a gradient of malformations and reduction anomalies of virtually all tissues. The most common pattern, however, consists of a markedly edematous fetus with relatively well-developed legs, and incomplete pelvis and lower spine. The body cavity contains some incomplete abdominal viscera but usually no thoracic organs. The upper portion of the twin consists of edematous cystic tissue. This perfused twin has no placental vascular connection and its cord vessels are conjoint with those of the supporting pump twin on the surface of the placenta or somewhere along the cord in direct artery to artery and vein to vein anastomosis, as observed in our case [1, 3].

The complications for the pump twin are cardiac failure, right ventricular hypertrophy, pulmonary stenosis, hypoalbuminemia, hepatosplenomegaly, ascites and hydrops [1].

For *Chorangiophagus parasiticus* to develop vascular anastomosis should occur at 18 to 21 days of gestation. This allows discordant growth and larger twin to perfuse the delayed twin. This can occur due to chromosomal abnormality, single umbilical cord and cardiac abnormality. The perfused twin receives poorly oxygenated blood flowing in reverse direction leading to reduction of the previously formed tissue. The point of entry of blood is at the level of iliac vessels; hence the caudal parts of the embryo are better preserved than the cranial parts [3].

This malformation can be identified as early as 12 weeks by ultrasound examination. There is no increased risk of this malformation to recur in subsequent pregnancy [1]. There are many modalities of treatment for this condition mainly aiming at occlusion of the cord vessel of the abnormal fetus [2].

References:

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