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Hemangioma of the Umbilical Cord: Case Report and Review of the Literature

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Abstract

We report a case of an umbilical cord hemangioma (HC) diagnosed prenatally in a twin pregnancy. The first twin had intrauterine growth restriction (IUGR). Despite the large size of the HC, the pregnancy resulted in a favorable outcome for both twins. This case adds to the existing literature on HC and highlights the importance of considering HC in the differential diagnosis of fetal abdominal masses.

Subject Areas

Obstetrics

Keywords

Hemangioma, Umbilical Cord, Twin Pregnancy

1. Introduction

Umbilical cord hemangioma (HC) is a rare benign fetal vascular tumor. It develops from the umbilical vessels of the cord, most frequently at the level of an artery. Despite its benign nature, HC is associated with potential fetal morbidity and mortality due to an increased risk of prematurity, fetal death in utero (FDIU) [1] [2] [3] and intrauterine growth retardation (IUGR) [4].

We report a case of antenatal diagnosis of HC with a favorable prognosis despite a large size and a review of the available data in the literature.

2. Case report

A 36-year-old woman, 4 gravida 6 para, was admitted at 34 weeks for a twin pregnancy and was admitted to our hospital for twin-to-twin transfusion syndrome in a 34-week pregnancy, with poor follow-up and a first-trimester test

showing a free beta-hCG of 1100 g/l. The examination was unremarkable with a blood pressure of 13/7, a negative urine test, and no labor.

The ultrasound showed a monochorionic biamniotic twin pregnancy, a stuck twin sign, twin 1 in oligoamnios with an amniotic fluid index (AFI) of 1, total weight estimation of 1500 and a normal resistance index of 0.78, twin 2 in hydramnios with an AFI of 10, total weight estimation2600 and a resistance index of 0.66, and a stage I twin-to-twin transfusion syndrome. A cesarean section was scheduled with the assistance of neonatologists. The first male twin weighed 1405 g and had an Apgar score of 10 at 1 minute of life. The second female twin weighed 2785 g and had an Apgar score of 10 at 1 minute of life. The delivery was marked by the presence of a mass at the placental insertion of the cord of the first twin.

No malformation, particularly cutaneous, was observed in the two newborns.

An anatomopathological examination was performed on the placenta and the cord. Macroscopically, the placenta weighed 933 g and measured 30 × 20 × 4.5 cm with a 5 cm dense and remodeled whitish focus. Microscopically, the whitish focus corresponded to a vascular proliferation made of multiple congested and dilated vessels with a border made of turgid endothelial cells without cyto-nuclear atypia or mitosis.

The interstitial tissue was partially fibrous and dissociated by congestive areas with organized hematic and fibrinous material in places and dystrophic calcifications corresponding to a remodeled umbilical cord capillary hemangioma without obvious histological signs of specificity or malignancy.

3. Discussion

HC is a rare tumor. Its ultrasound appearance is characteristic. No umbilical Doppler abnormality or associated fetal morphological abnormality was observed. There was a growth abnormality in the first twin (IUGR).

The cases of postnatal discovery (15 cases) are mostly relatively old cases (before 1990) [1] [5]. The improvement in the quality of antenatal ultrasound screening probably explains this finding.

One of the cases reported in 1987 by Dombrowski et al. was revealed by rupture of the cord causing intrauterine hemorrhage in the context of premature rupture of membranes in a heroin-addicted patient whose pregnancy had not been followed up [6] [7].

In the majority of cases (20/33 cases), the location of the tumor on the cord was close to the placental insertion [5]. The location of the tumor does not seem to be correlated with the risk of complications of these tumors. However, depending on the location of the tumor, different differential diagnoses must be considered. Near the abdominal insertion, omphalocele must be ruled out [5] [8]. Conversely, Persutte and Lenke, in 1990, described 2 cases of persistent urachus misdiagnosed as HC [9].

There are no recommendations for the route or timing of delivery in case of

HC. The size of the tumor should be taken into account when choosing the route of delivery. The maximum diameter of HC for which vaginal delivery has taken place was 70 mm [5] and for cesarean sections, 170 mm [9]. Concerning the timing of delivery in case of absence of hemogioma or growth restriction: it s between 36-38 weeks if it's monochorionic diamniotic, we didn't find any recommendations concerning the delivery time of restriction growth with hemogioma. The literature data on cases of twin pregnancy and umbilical cord hemangioma is very limited.

4. Conclusion

HC is a rare benign tumor of the umbilical cord. Prenatal diagnosis of HC is possible with ultrasound. The management of HC should be individualized based on the specific characteristics of the tumor and the pregnancy. In most cases, HC does not pose a significant risk to the mother or fetus and vaginal delivery is safe. However, in some cases, cesarean section may be necessary.

Conflicts of Interest

The authors declare no conflicts of interest.

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