Gynaecology & Obstetrics Case report
ISSN: 2471-8165

Open Access Case Report

Placental Teratoma Case Report and Review of the Literature

De Ganzo Suárez Tania[1]*, Caamiña Álvarez Sara[1], Pérez Gómez A[1], Rodríguez T[1] and Vilar M[2]

[1]*Obstetrics and Gynecology Service, Our Lady of Candelaria University Hospital, Santa Cruz de Tenerife, Tenerife, Canary Islands, Spain*

[2]*Pathological Anatomy Service, Our Lady of Candelaria University Hospital, Santa Cruz de Tenerife, Tenerife, Canary Islands, Spain*

Abstract

Objective: Placental teratoma is a very rare no trophoblastic benign tumour. The tumour we present lays between amnios and chorion. It contains disorganized tissues (skin, bone, fat, etc.). Lack of a recognizable umbilical cord and no recognizable skeletal development are used as a differential diagnostic criterion for placenta teratoma. In our case umbilical cord was absent; however, the tumour was connected to the placenta by a vascular channel covered only by fetal membranes without Wharton´s jelly. We present a case to review the literature.

Material and methods: A 29 years old woman and 37 weeks of gestation. On the scan we found out a heterogenous mass of 8, 3 × 8, 5cm arising from the placenta.

Results: The diagnosis of the placental teratoma is based on prenatal ultrasound and histological examination of the placenta. This tumour does not appear to increase the risk of a fetal malformation. The differential diagnosis must be with fetus acardius amorphous. Maternal and fetal outcome were good.

Conclusion: Placental teratoma is a very rare no trophoblastic benign tumour.

INTRODUCTION

Teratomas are neoplasms produced by totipotential embryonic germ cells and thus can be composed by virtually any type of tissue. They contain elements derived from multiple germ cell layers. Placenta is an extremely rare site for this tumour, to date, 40 cases of placental teratoma and 21 cases of umblical cord teratoma have been reported in the literatura [1] after the first case was described by Morvilli, et al, in 1925 [2]

CASE PRESENTATION

A twenty-nine years old fourth gravida with a previous healthy child was referred to our hospital at 37 weeks of pregnancy due to fetal breech position to performance a cephalic external version. Combined screening test at first trimester was low risk and anomaly scan was normal. A routine scan to assess fetal position, fetal well-being, amniotic fluid volume and placental position is always carried out before doing a cephalic external version. In this scan the fetus was in breech position, estimated fetal weight was normal, amniotic fluid was normal and placenta was placed in the anterior wall of the uterus. Close to the placenta we found out a heteroechogenous mass with well-defined walls of 85x 82 mm that seemed to be connected to the placenta by the amniotic membranes.

There were some echogenic foci with acoustic shadows inside the mass that suggested calcification. On Doppler ultrasound examination, there was minimal vascularity on the surface of the mass (Figure 1).

At thirty-eigth weeks the patient was posted for cesarean section for breech presentation, and a live female baby

Received: 04-June-24 **Manuscript No:** IPGOCR-24-21436

Editor assigned: 06- June-24 **PreQC No:** IPGOCR-24-21436 (PQ)

Reviewed: 18- June -24 **QC No:** IPGOCR-24-21436 (Q)

Revised: 24- June-24 **Manuscript No:** IPGOCR-24-21436 (R)

Published: 01- July-24 **DOI:** 10.36648/2471-8165.10.4.31

Corresponding author: De Ganzo Suárez Tania, Obstetrics and Gynecology Service, Our Lady of Candelaria University Hospital, Santa Cruz de Tenerife, Tenerife, Canary Islands, Spain; Phone No: +34922600526 E-mail: tgonsua@gobiernodecanarias.org

Citation: Tania DGS, Sara CA, Gómez PA, Rodríguez T and Vilar M. (2024) Placental Teratoma Case Report and Review of the Literature. Gynecol Obstet Case Rep. Vol.10 No.4:31.

of 3330gr. was delivered. There were no anomalies in the neonate. The placenta weighted 690 gr. and measured 25 × 14 × 4 cm. Maternal and fetal surfaces of the placenta were unremarkable. The centrally inserted umbilical cord was 20cm. long and contained two arteries and one vein.

The tumour was attached to the membranes by a vascular pedicle formed by a vein and an artery covered by fetal membranes without Wharton´s jelly. The arterial supply was obtained from an artery in the pedicle with its origin in one of the large fetal arteries on the chorionic surface of the placenta. Venous drainage was through a vein in the pedicle, connected to a fetal vein on the chorionic surface. The mass weighted 192gr. And mesuared 8 × 7 × 5 cm. (Figure 1). The cut surface of tumor was solid, multinodular, yellow in colour and heterogenous with adipose tissue, cartilage, bone structures and hair (Figure 2 and Figure 3).

On histological examination (Figure 4, Figure 5 and Figure 6) the tumor was covered by skin and appendages including sweat glands, sebaceous glands and well- developed hair follicles. The

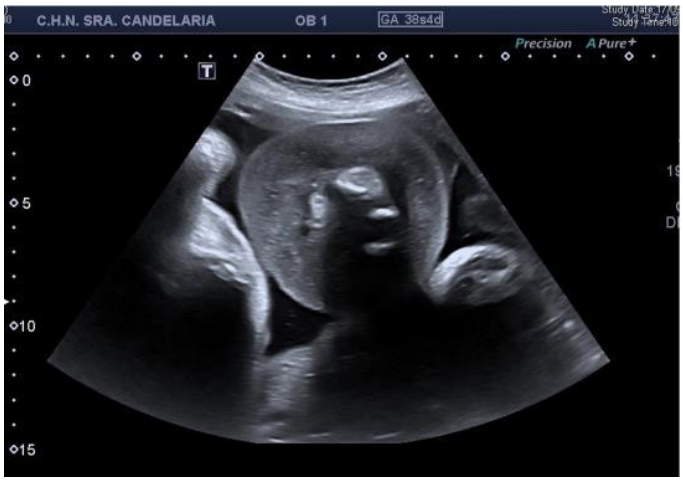

Figure 1: A heteroechogenus mass with well-defined walls, with some foci echogenic inside that suggest calcifications.

Figure 2: Mass cover by skin and hair and with a membrane that connect to the placenta.

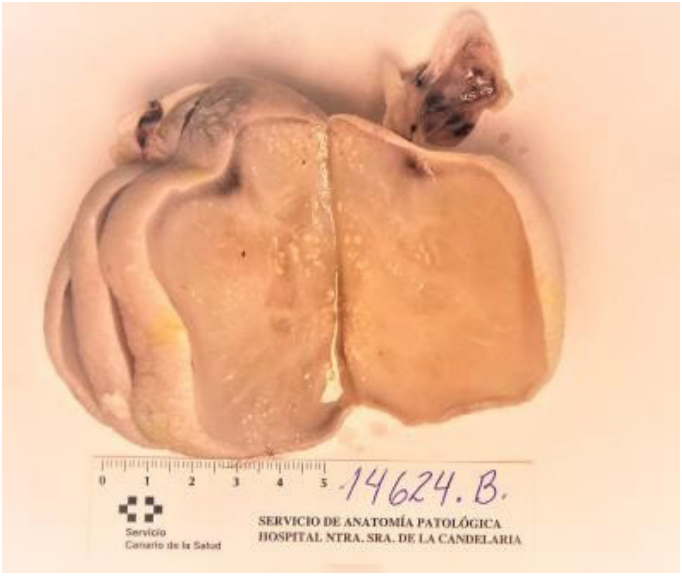

Figure 3: Heterogeneous cut surface encapsulated by skin with edematous conective tissue.

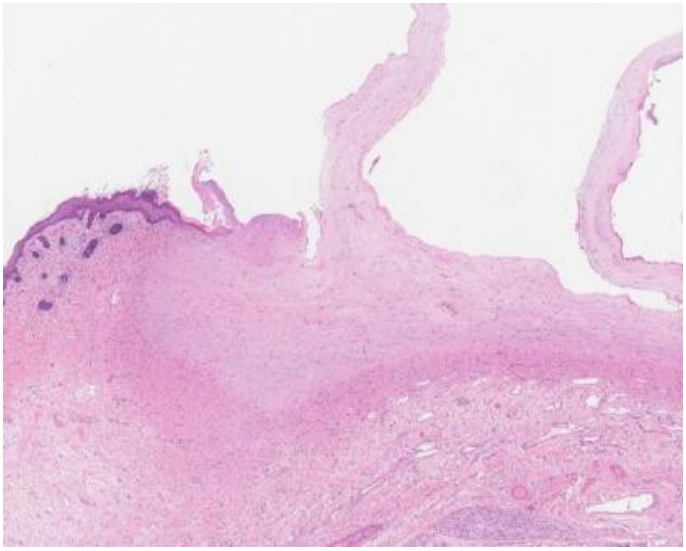

Figure 4: Vascular pedicle, skin and adnexal structures.

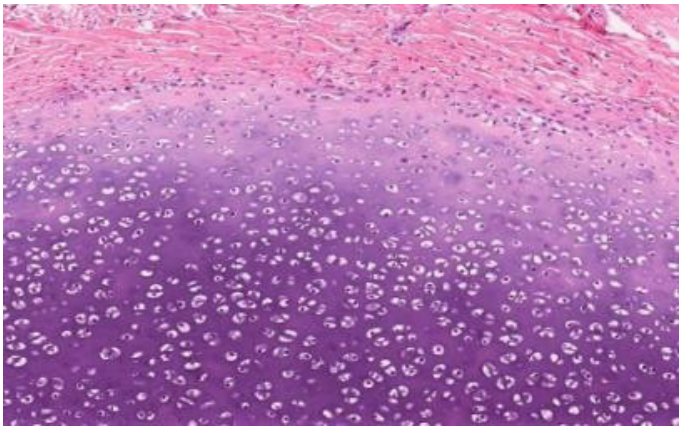

Figure 5: Cartilage tissue.

deepers layers of the tumor were composed of different tissues within a vascular, loosely cohesive and edematous connective tissue. Small blood vessels and peripheral nerve fibers with

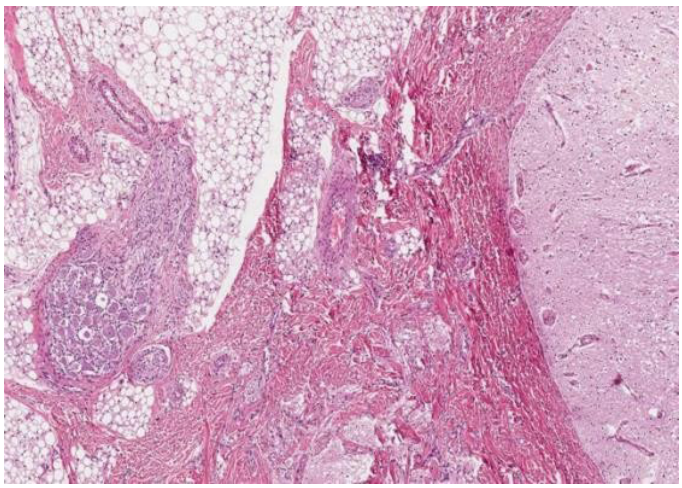

Figure 6: Adipose tissue, ganglion cells and brain tissue.

ganglion cells were scattered throughout the adipose tissue intermingled with brain tissue and striated muscle fibers. The central area of the tumour contained squamous and colonic-type mucosa, renal embryonic tissue and bone.

No immature neuropithelium or axial-type skeletal organization were found in the tumour. No umbilical cord was recognizable.

DISCUSSION

Placental teratomas are rare tumours with an unclear histiogenesis [1]. However, there is considerable evidence that placenta teratoma may originate from the abnormal migration of embryonic germ cells [2] These cells migrate through the umbilical cord before arriving in the placenta [3]. After the third week of development, primordial germ cells that arise in the dorsal wall of the yalk sac begin migration to the genital ridge along the dorsal mesentery of the hindgut. During this stage, some primordial germ cells may go stray and migrate to a more distant midline structure, like the mediastinum, where a teratoma of development may arise later in life. At the beginning of development, the primitive gut investigates the umbilical cord, and the well-formed intestinal mucosa can be seen in the cord up until the third month and occasionally the fourth month. It is possible to hypothesise that the aberrant germ cells can migrate through this evaginated hind gut and give rise to a teratoma of the umbilical cord. If they progress into the loose connective tissue of the umbilical cord and continue further migration, they may arrive at the fetal surface of the placenta between amnion and chorion [4-6].

The differential diagnosis must be done with fetus amorphous acardius. Fetus acardius is a rare fetal malformation characterized by the absence of fetal heart and displays no resemble to a fetal embryo [7,8]. It is always happen in monozygotic, monochorionic twins [9] or rarely, triplets [10] Diagnosis of fetus acardius depends on the presence of a craniocaudal skeletal organization and an umbilical cord [4] Fetus acardius is related with hydramnios, congestive heart failure, preterm delivery and even death of the co-twin, however; teratomas are rarely associated with fetal distress and have a good fetal outcome.

The case was diagnosed as teratoma, and not as fetus acardius, because the absence of an umbilical cord and lack of axial-type skeletal organization [5]. The rest of the placenta showed syncytial knots and some foci of calcification, which are features of full-term placenta.

CONCLUSION

Placental teratoma is a very rare no trophoblastic benign tumour.

REFERENCES

1. Elagöz S, Aker H, Cetin A. (1998) Placental teratoma: A case report. Eur J Obstet Gyn R B 80(2): 263-265.
2. Morville P.A.U.L. (1925) Une teratoma placentaire. Obstet Gynecol 11(1925): 29-32.
3. Shimojo H, Itoh N, Shigematsu H, Yamazaki T. (1996) Mature teratoma of the placenta. Pathol Int 46(5): 372-375.
4. Fox H, Butler-Manuel R. (1964) A teratoma of the placenta. J Pathol Bacteriol 88(1): 137-140.
5. McHenry A, Morotti R, Hui P. (2022) Placenta teratoma or acardiac fetus amorphous: A case study by DNA genotyping. Int J Gynecol Pathol 41(1): 51-58.
6. Fox H. (1986) Pathology of the placenta. Clin Obstet Gynaecol 13(3): 501-519.
7. Alderman B. (1973) Foetus acardius amorphus. Postgrad Med J 49 (568): 102-105.
8. Moore TR, Gale S, Benirschke K. (1990) Perinatal outcome of forty-nine pregnancies complicated by acardiac twinning. Am J Obstet Gynecol 163(3): 907-912.
9. Wong AE, Sepulveda W. (2005) Acardiac anomaly: Current issues in prenatal assessment and treatment. Prenatal Diag 25(9): 796-806.
10. Dahiya P, Agarwal U, Sangwan K, Sen J. (2004) Antenatal diagnosis of twin-reversed arterial perfusion sequence (acardiac amorphous) in a triplet pregnancy: Case report. Arch Gynecol Obstet (269): 147-148.