

A Case Report of Fetal brain tumor in a dichorionic twin pregnancy.



Authors: Astudillo A, Arbio S, Gutiérrez S, Senyk G., P. Nemer, D. Fariña, C Cannizaro . Pediatric Hospital "Prof. Dr. Juan P. Garrahan". Buenos Aires, Argentina

**Introduction:** Fetal intracranial tumors are rare, accounting for 0.5% to 1.9% of all pediatric tumors. The most common fetal brain tumor is teratoma, followed by astrocystoma, craniopharyngioma, and primitive neuroectodermal tumor. Fetal intracranial tumors are detected usually during the 3rd trimester. Most are associated with a poor prognosis. Such tumors can cause spontaneous intracranial hemorrhage or dystocia during delivery. The prognosis worsens with increasing tumor size and decreasing gestational age at diagnosis. [1]

**Objective:** We present a case of a fetal brain tumor in a dichorionic twin pregnancy. **Method:** This is a case report. Data were collected from the patient's clinical history. **Results:** A 28-year-old patient, G2P1, was referred to our Prenatal Diagnosis and Treatment program with a 24.4 weeks dichorionic, diamniotic twin pregnancy complicated by a fetal brain tumor in fetus 2 [upper]. At 22 weeks fetal scan, in fetus 2 bilateral ventriculomegaly was visualized [RV: 16mm, LV: 14mm] with a central focal solid echogenic image of 21mm x 25mm x 18mm + polyhydramnios. We performed an obstetric ultrasound at our hospital that reported: 24.6 weeks dichorionic diamniotic twin pregnancy. Fetus 1: normal scan [lower]. Fetus 2 [upper]: presents a large echogenic image that impresses solid, supratentorial in location with calcifications inside, with lobulated edges of approximately 47mm x 36mm x 25mm at the central nervous system level that replaces the midline structures. Obstructive hydrocephalus and polyhydramnios. A Fetal MRI was performed that reported: Non-communicating hydrocephalus secondary to a deep expansive process in the midline which, due to its characteristics, may correspond to an astrocytoma. Interconsultation with pediatric neurosurgery service is carried out for evaluation and postnatal prognosis who are issued and determine that the prognosis of Fetus 2 is ominous and if survival is achieved, it will lead to major comorbidities.

An interdisciplinary meeting with associated maternity is carried out and it is suggested from the Prenatal Diagnosis and Treatment Program to perform fetal reduction with amniodrainage of fetus 2 in order to give the fetus 1 greater opportunities. Parents are informed who will evaluate the behavior. At 27 weeks, the patient was admitted on duty with diagnosis of preterm labor. Presents uterine dynamics and 2 cm of cervical dilation. Uteroinhibition is performed. Receive fetal lung maturation. It is defined to carry out induced asystole and amniodrainage of fetus 2, the informed consent is signed. Selective feticide of fetus 2 + amniodrainage is performed, fetus 1 presents good fetal vitality post procedure. At 37 weeks gestational age the patient entered labor and delivered vaginally a live 2400 gr female baby and a stillbirth. Fetus 2 post natal autopsy inform: **congenital adamantinomatous craniopharyngioma**.



**Conclusion:** Fetal brain tumors have a very poor prognosis and have a very low survival rate with a high rate of comorbidities. Given the presentation of this type of tumors at early gestational ages, the prognosis worsens and postnatal therapeutic options are limited. It is important a multidisciplinary approach of this cases for better outcomes as possible. So, in this context, offering a termination of the pregnancy of the fetus with a brain tumor is a valid and plausible option to be taken into account, offering it to the parents as a prenatal therapeutic alternative.