**Introduction**

Vein of Galen aneurysm is a rare congenital anomaly, originated from a defect in fusion of internal cerebral veins. It constitutes 1% of all intracranial vascular malformations. Due to low resistance, it produces high-output cardiac failure (1,2). A 39-year-old woman was diagnosed Galen vein aneurysmal malformation with the ultrasonographic finding of dilated structure in the midline of the brain and turbulent flow within the dilated vascular structure showed with color flow Doppler ultrasonography at the 26th gestational week. We report the subject diagnosed prenatally in our clinic in light of the literature.

**Case Report**

A 39-year-old woman, gravida 4, para 1, first trimester abortions 2, was referred us for evaluation of cardiac structure due to suspicion of anomaly at 25 weeks 2 days of gestation. Ultrasonographic examination resulted with increased nuchal thickness, left deviation of cardiac axis, cardiomegaly filling the half of the thorax, significantly dilated superior vena cava and vasculature of the neck.

As we check the cranial anatomy; dilated structure in the midline of the brain was noticed and color flow Doppler ultrasonography demonstrated turbulent flow within the dilated vascular structure, diagnosed Galen vein aneurysmal malformation (Figure 1,2). In the first visit, we also detect; cardiomegaly, bilateral ventriculomegaly (ventricular atria 17mm bilaterally) and mild polyhydramnios.

**Figure 1:** Cranial anatomy, dilated vascular structure in the midline.
Dilated right cardiac chambers, cardiomegaly were detected without cardiac structural anomalies with fetal echocardiography. Fetal magnetic resonance imaging (MRI), a complementary method, can not be performed but it is important to confirm the diagnosis, to detect associated brain abnormalities and to rule out differential diagnoses including arachnoid, porencephalic or choroid plexus cysts, pineal tumors, choroid papilloma and intracerebral hematoma (3, 6).

Antenatal visits were continued at frequent intervals. Considering the possibility of premature birth, single cure betametasone treatment was given for the fetal lung maturation at 30th weeks of gestation. In another visit, symptoms of the cardiac insufficiency such as; edema of the scalp, pericardial effusion, cardiomegaly and severe polyhydroamnios were detected and cesarean section was performed at 32 weeks of gestation. A female infant weighing 1750 g, with apgar scores of 6 at 1 min, 7 at 10 min, was delivered. The newborn with respiratory distress was intubated and intratracheal surfactant was applied.

Vascular and interventional radiology planned embolization but the newborn can not be stabilized there for eshe did not receive embolization. After postpartum 10 hours, following the decrease in saturation and bradycardia, cardiopulmonary arrest was occurred and the newborn died.

Placental pathology report was including; heavy placenta according to gestational age, dismaturation in the chorionic villi and such findings were consistent with non-immune hydrops.

**Discussion**

Galenic vein aneurysmal malformation is usually established in the third trimester of pregnancy, presenting with cardiomegaly. As Galenic vein aneurysmal malformation is not associated with chromosomal anomalies, fetal karyotyping was not routinely carried out. Out come is particularly poor when associated anomalies such as signs of cardiac dysfunction (which is directly related to the size of arteriovenous shunt) or cerebral defects (the extent of cerebral ischemia caused by increased venous pressure and so-called cerebral steal) were detected prenatally. Vein of Galen aneurysm can be complicated with nonimmune hydrops, as it has occured in our case. Regardless of the type of treatment, perinatal morbidity and mortality are high, often due to cardiac failure. Treatment of choice involves performing transarterial embolization in the postnatal period and its efficacy depends largely on the size of malformations and developed complications (7, 10).

In the literature, some of the publications suggest birth before the fetal decompensation but, some of them say that premature birth does not alter the newborn outcomes. Severe cardiac failure, is the most important predictor of morbidity and mortality (1, 11, 13).

**References**