

Vein of Galen Malformation

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History

Midline cystic intracranial mass on prenatal ultrasound.

Diagnosis

Vein of Galen Malformation

Discussion

In normal fetal development, the median prosencephalic vein of Markowski becomes the great cerebral vein, also known as the vein of Galen. If an arteriovenous fistula forms between the choroidal arteries and the median prosencephalic vein of Markowski, it is referred to as a Vein of Galen Malformation (VOGM). Shunting of blood between the choroidal arteries and vein of Galen results in its dilation and in increased cardiac workload. VOGMs are associated with congestive heart failure (CHF), hydrocephalus and brain parenchymal injury.

The most common presentation of VOGM is CHF in neonates, and increased head circumference in infants and children. VOGM can be detected on prenatal ultrasound or MRI. After birth, transcranial doppler can be used to assess direction of blood flow. Neonates presenting with congestive heart failure may undergo echocardiography to determine the severity of heart failure.

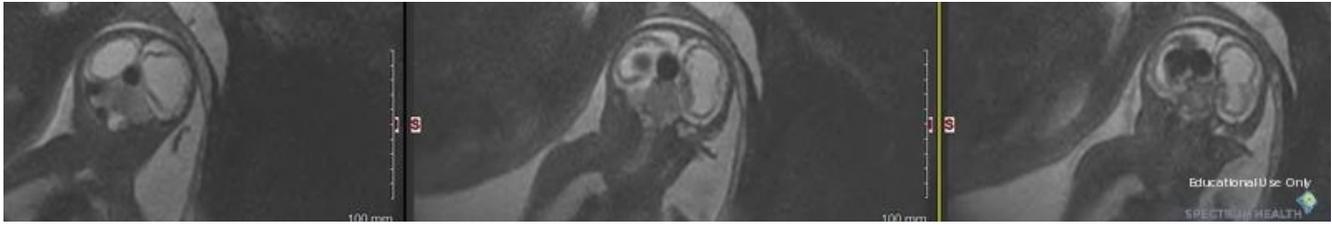
Treatment for VOGM is endovascular embolization. VOGM patients with CHF treated with endovascular embolization are less likely to experience good neurologic outcomes than VOGM patients without CHF. Neonates are also significantly less likely to have good neurologic outcome than infants and children. This may be due to poorer cardiologic status and increased severity of disease.

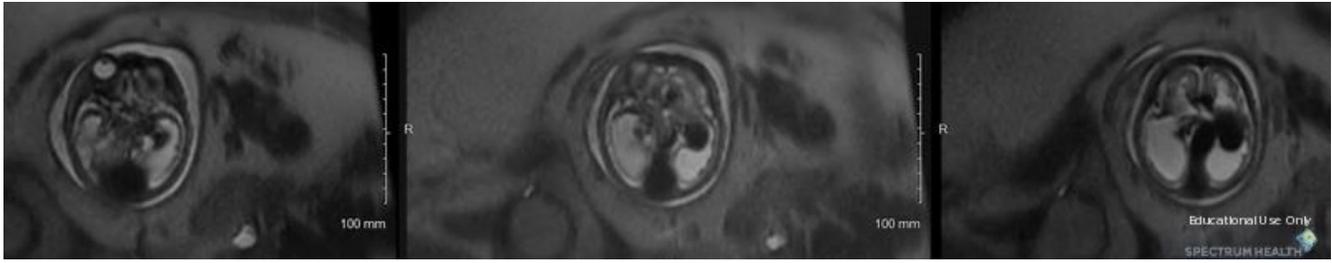
Findings

MR-3 plane single shot fast spin echo T2 images targeted for the fetal brain show a large midline flow void and enlarged left choroidal vessels.

Contributor

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