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VEIN OF GALEN MALFORMATION-A RARE CASE REPORT

Radio-Diagnosis

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ABSTRACT

Background: Vein of Galen malformation better termed as median prosencephalic vein malformation is a uncommon intracranial anomaly accounting for 1-2% of intracranial vascular abnormalities and upto 30% of pediatric intracranial vascular abnormalities. **Objectives:** Results from a congenital arterio-venous fistula between deep choroidal arteries and median prosencephalic vein of Markwoski (MPV) which develops during 6-11 weeks of gestation and prevents normal regression of median prosencephalic vein of Markwoski. To illustrate the role of neurosonogram and colour Doppler in the diagnosis of vein of galen malformation.

KEYWORDS

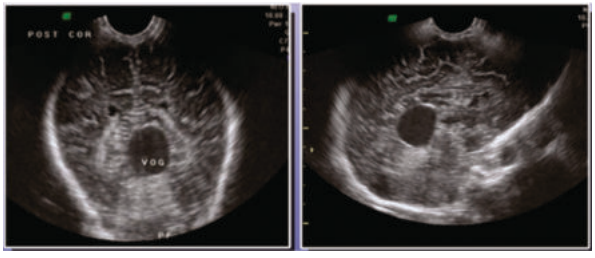
Vein of Galen malformation, Neuro-sonogram, color Doppler.

CASE REPORT

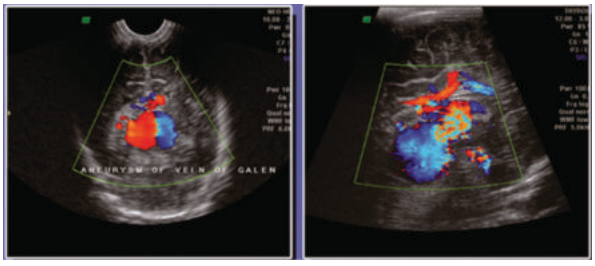
A 7day old female baby born at full term by vaginal delivery with birth weight of 2500gms, normal APGAR score and head circumference presented with history of improper feeding and tachypnea since birth.

On examination mild cranial bruit and bounding pulse noted.

Patient was investigated with neurosonogram with colour doppler imaging.



Neurosonogram: Fig 1 and 2(Coronal and Mid Sagittal Views)- Show Midline Anechoic Lesion Posterior to the Third Ventricle



Colour Doppler: Fig 3 and 4(Coronal and Sagittal Views)- Shows Fiiling up of the Anechoic Lesion with Multiple Feeding Arteries and Draining Veins.

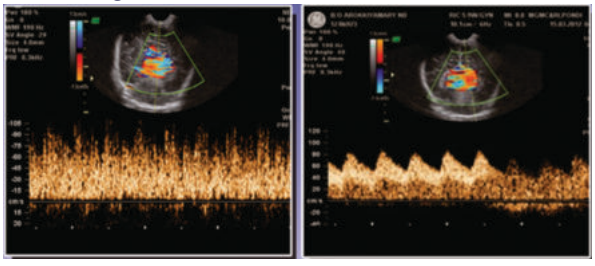


Fig 5 (Coronal View)-Spectral Tracing Shows High Velocity Venous Flow within the Lesion
Fig 6 (Sagittal View)-SpectrTracing Shows High Velocity Low Resistance Flow in the Artery Adjacent to the Lesion.

DISCUSSION

Presentation is often with high-output cardiac failure in the neonatal period, although low-flow aneurysms may remain undetected into adulthood.

The malformation is due to an arteriovenous fistula of the median prosencephalic vein (MPV) (a precursor of the vein of Galen) occurring at 6-11 weeks gestation. The MPV fails to regress and becomes aneurysmal. It drains via the straight sinus (present only in 50%) or a persistent falcine sinus and the vein of Galen does not form.

With increased availability and quality of antenatal ultrasound the diagnosis is increasingly made prior to delivery. Antenatal detection is however mostly reported late in pregnancy (3rd trimester)

The dilated median prosencephalic vein (MPV) appears as an anechoic structure in the midline posteriorly and demonstrates prominent flow on Doppler examination. If there are complications which regards to shunting, other ancillary sonographic features such as development of hydrops fetalis or fetal cardiomegaly may be seen.

CONCLUSION

This report emphasizes on the significant role of sonography and colour doppler imaging for the diagnosis of vascular abnormalities like Vein of Galen malformation in patients presenting with congestive cardiac failure.

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