

Case Report

A Rare Case of Aneurysm of Vein of Galen in 32-33 weeks Foetus

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An aneurysm of vein of Galen is a rare congenital arteriovenous malformation of the Central Nervous System with reported incidence of less than 1% of cerebral vascular malformations with prevalence of 1 in 25,000. We report a case of aneurysm of Vein of Galen diagnosed in intrauterine life at 32-33 weeks of gestation.

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Key words : Vein of Galen, Sonography, Colour doppler, “Keyhole sign”.

Vein of Galen aneurysm occurs at 6th to 11th weeks gestation, however, its diagnosis is made in third trimester or postnatal period. Third trimester Ultrasound scan & Colour Doppler have a very important role in evaluation of this anomaly as there is evidence of approximately 50% mortality in the neonatal period, due to shunting lead to complications such as hydropsfetalis or fetal cardiomegaly¹.

CASE REPORT

A 23-year-old woman, primigravida with 32-33 weeks of pregnancy came for an tenatal ultrasound to Radiology Department of SMS Hospital.

On sonography examination of the foetal head, a midline, deeply situated, interhemispheric, oval shaped anechoic cyst was seen. This intracranial cystic lesion showed high frequency Doppler signals on colour doppler. No other intracranial defect seen.

Patient's delivery was normal at 36 weeks 2 days of gestation, birth weight was 1830 gms. All the findings were confirmed with postnatal sonography & CT scan. Size of aneurysm of vein of Galen has increased with development of hydrocephalus in 6 month infant. Infant is malnourished & cachexic. No operation is still carried out.

DISCUSSION

The “**Keyhole sign**” is a gray scale sonography finding. A midline, intracranial, interhemispheric, spherical, anechoic cyst extending from the thalami to atubular channel was seen, resembling a “**Keyhole**”.

Most cases present in neonatal life with Congestive Cardiac Failure. We report a case of aneurysm of vein of Galen diagnosed in intrauterine life at 32-33 weeks of

Editor's Comment :

- Ultrasound & colour Doppler are important imaging modalities for prenatal diagnosis of aneurysm of vein of Galen. Which present with congestive cardiac failure in neonatal life.

gestation. Third trimester Sonography & Colour Doppler are important imaging modality for prenatal diagnosis³. Foetal manifestations have included non-immune hydrops, hydrocephalus and intracranial haemorrhage. A cystic cranial mass was identified by Ultrasound in a foetus at 32-33 weeks of gestation. Both pulsed-wave Doppler and colour-velocity imaging studies suggested aneurysm of the vein of Galen^{2,4}. The foetus demonstrated - no evidence of hydrops on serial Ultrasound examinations.

The presence of this malformation should prompt close follow-up for the remainder of the pregnancy. Careful obstetric management and early postnatal intervention may lead to a favourable outcome (Figs 1-4).

CONCLUSION

The prenatal diagnosis of aneurysm of vein of Galen

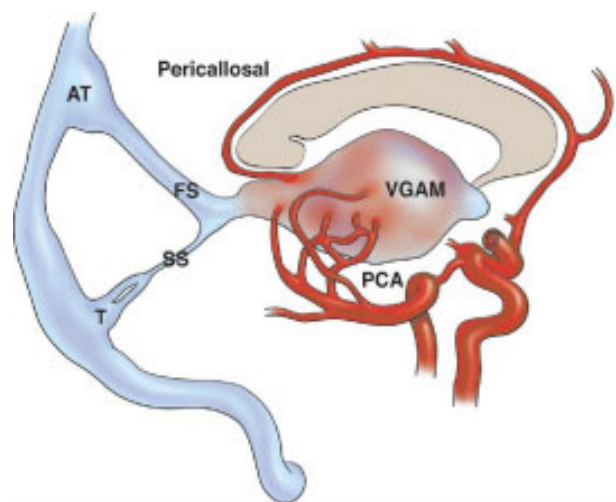


Fig 1 — Aneurysm of Galen

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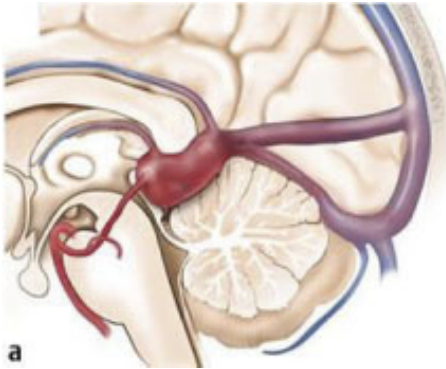


Fig 2 — Vein of Galen

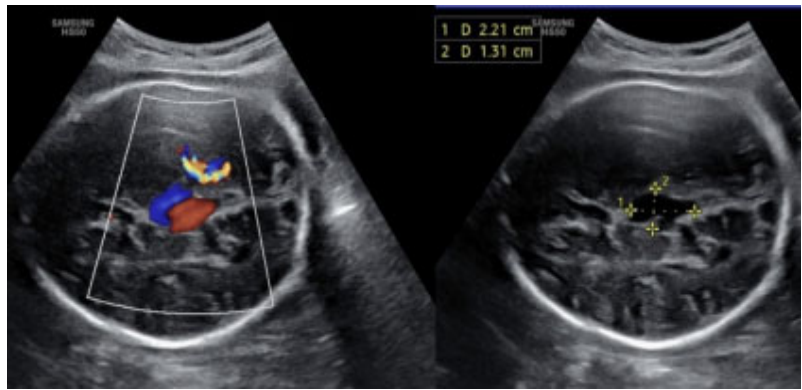


Fig 3 — Antenatal ultrasound image of vein of Galen

"Keyhole sign"

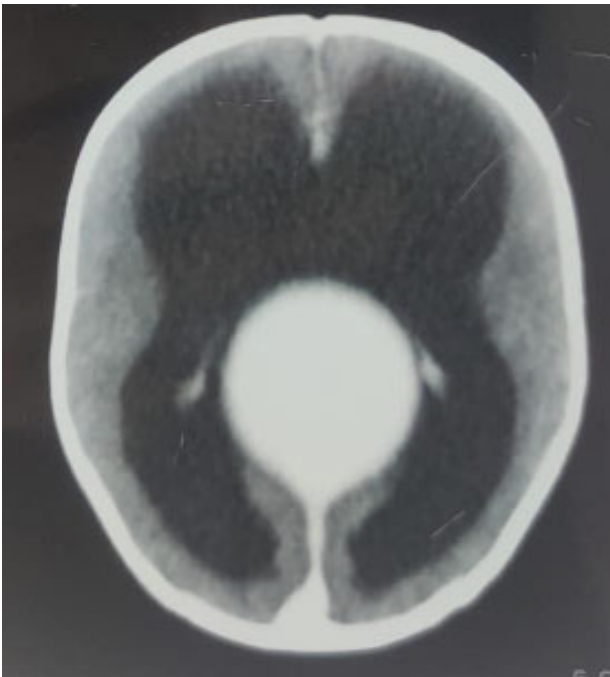


Fig 4 — CT image of 6 month infant - increase in size of Aneurysm of vein of Galen & dilated lateral ventricles

is usually made during the third trimester by Ultrasound & Colour Doppler⁵. The cerebral shunt created by the aneurysm can increase the cardiac preload and lead to Congestive Heart failure.

Intrauterine ultrasound signs of Heart failure, such as cardiomegaly, tricuspid insufficiency, polyhydramnios, pericardial and pleural effusion, oedema and ascites carry a poor prognosis and indicate an intractable high-flow anomaly.

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