



# Intracranial Vein of Galen Malformations and Its Management

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## Abstract

**BACKGROUND:** Vein of Galen Malformation (VOGM) is a rare congenital arteriovenous malformation affecting the paediatric population, characterized by a fistula between the diencephalon and a dilated vein of Galen.

**CASE DESCRIPTION:** This report presents the case of a 6-month-old male infant referred for developmental delays and abnormal head circumference. Clinical examination revealed macrocephaly, dilated scalp veins, and neurological abnormalities. Neuroimaging, including CT, MRI and MRA, confirmed a large VOGM with associated hydrocephalus. Furthermore, an echocardiography revealed a high-flow cardiac murmur, confirming the hemodynamic impact of the VOGM. A multidisciplinary team devised a treatment plan involving a combined transvenous and trans-arterial endovascular embolization method using a “kissing microcatheter technique” and ventriculo-peritoneal shunt placement. Postoperative recovery showed improvement in neurodevelopmental milestones and reduced head circumference. VOGM management requires a comprehensive approach, including early diagnosis, precise imaging, and timely intervention.

**CONCLUSION:** This is a novel case because the interventional radiology speciality approach demonstrates the optimum diagnostic and preplanning investigations for cases of vascular origin. In addition, the kissing microcatheter endovascular embolisation technique highlights the importance of considering this innovative surgical option in complex vascular cases.

**KEYWORDS:** Paediatric Intracranial Vein of Galen Malformation, trans-arterial endovascular embolization, kissing microcatheter technique.