

# PEDIATRICS

# 2017

November 13-14, 2017  
London, UK

Guillaume Saliou, J Pediatr Care 2017, 3:4(Suppl)  
DOI: 10.21767/2471-805X-C1-002

## OPTIMAL MANAGEMENT OF PEDIATRIC CEREBRAL ARTERIOVENOUS MALFORMATIONS

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**T**hree types of brain arteriovenous vascular malformations have been described in children and are classified according to their anatomical location. Vein of Galen malformations located in the choroidal tissue of the roof of the third ventricle are the most frequent type. The remaining two are pial arteriovenous malformations located under the pia matter and dural arteriovenous malformations located in the dura. Sometimes, they remain asymptomatic, but often they can be associated with a wide range of symptoms related either to their angio-architecture or to their hemodynamic changes on the brain. Clinical presentations range from heart failure in high-flow arteriovenous malformations or hydrocephalus to subacute or chronic brain lesions related to local or regional venous hypertension. Additionally, venous reflux can expose the patients to brain haemorrhage. Some paediatric arteriovenous vascular malformations have been associated with various genetic mutations: Rendu-Osler-Weber disease or CM-AVM1 (RASA1 mutation) and CM-AVM2 (EPHB4 mutation), each of which are related to a specific phenotype. The treatment options for these vascular malformations are primarily endovascular with transarterial or transvenous embolization, depending on the angio-architecture and the type of lesion. A specific treatment strategy and schedule will be determined according to the type of malformation and its potential local or general effects on the brain. Ignoring the therapeutic window may lead to severe brain damages. The aim of this presentation is to provide an overview of the management of these arteriovenous malformations including the genetic findings, therapeutic strategies and timing of treatment in these particularly weak patients.

### Biography

Guillaume Saliou is currently the Head of the Interventional Neuroradiology Unit at Lausanne University Hospital, Switzerland. He is the former Head of the Paediatric and Adult Interventional Neuroradiology Unit in Bicêtre Hospital in France. He has completed his Postdoctoral qualification at Paris-XI University School of Medicine. He has published several papers in reputed journals and has been serving as an Editorial Board Member in the field of pre- and post-natal management of cerebrovascular diseases.

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