

## VASCULAR DISORDERS AND STROKE

Vascular Disorders in Children are rare but potentially serious problems. Common vascular disorders include: AVM or Arteriovenous Malformations, Cavernous Malformations, Moya Moya Vasculopathy, Vein of Galen Malformations. Children can present with stroke as a bleeding episode, a seizure, new weakness in an arm or leg, or change in mental status. An MRI and cerebral angiogram may be needed for diagnosis and surgical removal is sometimes necessary. **We offer functional Neuro-Imaging which can identify eloquent areas of the brain that need to be spared during surgery.**

### **What are vascular malformations?**

AVMs or arteriovenous malformations. Vein of Galen malformations are a type of AVM with which infants are born. They are a tangle of abnormal arteries and veins and can present with bleeding if left untreated.

Cavernous malformations are small collections of abnormal capillaries in the brain.

Moya Moya disease is a vascular disorder characterized by abnormal collateral vessels in an area not getting enough blood flow. There are several causes of moya moya, one is sickle cell disease.

### **What treatment options are available?**

Our team of Neurosurgeons, Hematologists, Intensive Care Specialists, and Neuro-imaging physicians will tailor an approach specific to your child's needs. Specialists in interventional neuro-radiology can sometimes block abnormal blood vessels (embolization) in the AVM to make it easier to remove by the surgeon. Surgery is often needed to carefully remove the AVM and we use the latest technology such as Neuro navigation (Stealth) and intraoperative angiography to safely remove these lesions. Sometimes radiation is used to obliterate an AVM or cavernous malformation.

### **What causes pediatric stroke?**

Pediatric Stroke is less common than in adults. It often occurs due to hemorrhage or bleeding from vascular malformations. It can also occur from ischemia or lack of blood flow to the brain. Dissections (a tear in the wall of an artery) due to trauma are a type of this ischemia. Children with sickle cell disease can develop moya moya a vascular disorder that can lead to stroke. Our team consists of Neurosurgeons, a Neuro Interventionalist/Endovascular Specialist, Intensive Care Team, Pediatric Neurologists, Radiology Imaging specialists, Rehab/Occupational and Physical Therapy, and Child Life Specialists. **We have a pediatric stroke and vascular team ready to handle any life-threatening event.**

