Vein of Galen Malformation

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Figure 1: MRI of the brain in sagittal T2WI and contrast-enhanced T1 MPRAGE demonstrate multiple serpiginous flow voids (star and bent arrow) representing dilated venous channels. Abnormal vessels (bent arrow) are seen draining into a dilated vein (thin arrow), which in turn drains into the superior sagital sinus. Narrowing of aqueduct of sylvius is marked with an arrowhead.

QUESTION

A 4-year-old child was brought to the Emergency Department with generalized tonic-clonic seizures. Right hemiparesis and unequal pupils were noted during examination. Computed Tomography of brain revealed acute subdural hemorrhage for which an emergency craniotomy and evacuation of clot was performed. Intraoperative finding of abnormal vessels prompted a need to revisit his past surgical history. Three years ago, he was diagnosed with hydrocephalus secondary to cerebral aqueduct stenosis, which eventually led to the insertion of a ventriculo-peritoneal shunt. Since then, he has suffered from global developmental delay and
infrequent episodes of epilepsy. One month prior to this recent presentation, he was treated for varicella zoster infection and discharged well, five days later. The initial Magnetic Resonance Imaging of brain taken three years earlier is also shown in Figure 1.

What should be the more appropriate cause of hydrocephalus in this patient?

Is there a correlation between varicella zoster infection and the current presentation of acute subdural hemorrhage?

Mail your response to the editorial address (medhealthukm@gmail.com). Answers will be published in the 2015(1) issue of Medicine and Health Journal.