Dural Arterio-venous Malformation

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A 50 years old male, presented with history of headache for 7 days which was becoming severe in intensity and not getting relieved with analgesics. There was also history of several episodes of vomiting, diplopia and imbalance while walking for 4 days. There was a past history of fall 12 years back when he had sustained a head injury. At presentation he was conscious. He had bilateral horizontal gaze palsy, vertical nystagmus, bifacial weakness, dysphagia and dysarthria, suggestive of lower cranial nerve involvement. He also had ataxia of gait. MRI brain revealed a dural Arterio-venous fistula (DAVF) in the right temporal lobe and the right cerebellar hemisphere with markedly dilated draining veins and a large draining vein is seen posterior to the brainstem (Figure 1) with evidence of edema in the pons (Figure 2) and right cerebellum. His digital subtraction angiography revealed dural AVM with venous loop (Figure 3). He underwent AVM embolization and was managed with steroids and anti-epileptics. Post-Intervention CT was negative for bleed (Figure 4). Patient improved gradually. His bulbar weakness and facial weakness improved. Recovery of ophthalmoplegia was slow. Arteriovenous malformations of the brain are congenital vascular lesions that affect 0·01–0·5% of the population, and are generally present in patients aged 20–40 years.¹ The true incidence of DAVFs is unknown. However, the reported incidence of intracranial DAVFs is approximately 10-15% of all intracranial vascular abnormalities. They were thought to be congenital in origin and to be associated with other vascular lesions. Now various etiologies are postulated: e.g., anomalies of venous system, venous thrombosis, head trauma, surgery, pregnancy, cortical vein thrombosis etc. Symptoms of DAVFs may be characterized further as either nonaggressive (e.g., tinnitus) or aggressive (e.g., intracerebral, subarachnoid, or subdural hemorrhage and neurologic deficits). These aggressive features are usually due to venous hypertension. Digital subtraction angiography remains the gold standard for diagnosing these fistulas. Endovascular treatment is one of the first-line options available for their management.

References


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