

FP31

Posterior circulation aneurysms in pediatric populations – A single institution experience

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Background: Pediatric posterior circulation aneurysms are rare entity. They differ from adults aneurysms in various aspects like morphology, etiology, management and outcome.

Methods: All the patients with age less than 18 year with posterior circulation aneurysm managed at our institute from January 2001 to January 2014 were include in this retrospective study. Demographic, clinical, radiological and management details were retrieved from hospital records.

Results: Total 15 (21%) patients with posterior circulation aneurysms were included in the study with mean age of 13.3 years (range-7-18 years). Sixty percent of patients were male. Headache was presenting symptoms in 54 % of patients followed by cranial nerve palsies (20%), seizure (13%) and ataxia (13%). Subarachnoid heamorrhage was present in 80% of patients on radiological studies. Most common location of aneurysm was in Posterior Cerebral Artery in 47% of patients followed by Vertebral and Basilar artery in 20% patients each. Two patients (13%) were having multiple aneurysms. Dissecting aneurysm was present in 60% of patients. Nine (60%) patients underwent endovascular surgery and in one (7%) patients microsurgical clipping were performed. In 2 (13%) patient spontaneous thrombosis and occlusion of aneurysm was observed. Twenty percent patients developed hydrocephalus which required intervention in form of ventriculoperitoneal shunt. At mean follow up of 29.7 months complete occlusion was observed in 80 % of patients. Good outcome was present in 86% of patients at last follow up.

Conclusion: Posterior circulation aneurysms are of dissecting variety commonly and Posterior cerebral artery was most common location. Good outcome was observed with both endovascular and microsurgical treatment at long term follow up.