Conclusion Endovascular treatment is a safe and effective treatment for venous causes of pulsatile tinnitus, achieving resolution of PT with low morbidity.

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E-127 ARE PEDIATRIC BRAIN ANEURYSMS REALLY INNOCUOUS: A REVIEW OF 1458 BRAIN MR ANGIGRAMS

Introduction The clinical characteristics, natural history, and appropriate management options of pediatric brain aneurysms remain poorly understood. We aim to evaluate clinical and imaging characteristics of pediatric brain aneurysms.

Materials and Methods A retrospective review of 1458 MR angiograms of pediatric patients (≤18 years old) obtained between 2006 and 2021 was performed. A non-infundibular arterial luminal outpouching larger than 1mm in size was identified as an ‘Intracranial aneurysm’. Patient demographics, clinical presentations, predisposing risk factors including family history, and underlying medical conditions were recorded. Angiographic images were analyzed for aneurysm characteristics such as location, number, maximum diameter, and interval changes on follow-up.

Results Forty-nine (0.03%) patients (30 females, 19 males) with 64 intracranial aneurysms were identified with a mean age 13.94 ± 3.73 years (Range 6–18 years). Eleven (22.4%) patients had multiple aneurysms. An underlying systemic illness was observed in 81.6% (40/49) cases, with sickle cell disease as the most frequent (25/49, 51%) diagnosis. A family history of intracranial aneurysms was recognized in 36/1458 (0.02%) patients. However, no intracranial aneurysm was found in these patients. While 02/49 (4%) patients presented with acute sub-arachnoid hemorrhage, 96% of patients were diagnosed as Unruptured intracranial aneurysms with headache as the most common (16/47, 34%) presentation. The majority (47/64, 73.4%) of these aneurysms were located in the anterior circulation, with ophthalmic segment of the ICA being most frequently (24/47, 51%) involved. Most (54/64, 84.4%) aneurysms were smaller than 4mm in size at the time of diagnosis. At least one follow-up MRA was available in 66% (31/47) of the patients with unruptured aneurysms. No change in the aneurysm size and morphology was noticed in 28 (90%) patients over an average imaging follow-up of 33 months. Three (9.6%) patients demonstrated an interval increase in the aneurysm size. Both SAH patients and two unruptured aneurysm patients were successfully treated with endovascular techniques.

Conclusion Female predominance with higher frequency of Small, and unruptured intracranial aneurysms was recognized in our cohort. A higher incidence of an underlying systemic illness especially sickle cell disease was also noted. Most intracranial aneurysms in children appear to remain stable. However, there is a definite risk of aneurysm progression which warrants regular clinical and imaging follow-up.