Encephaloduroarteriosynangiosis for Pediatric Moyamoya disease

- The Role of Encephaloduroarteriosynangiosis in Moyamoya Disease: A Consecutive Case Series From Pakistan
- Encephaloduroarteriosynangiosis for the Treatment of Cerebral Arteriovenous Malformations in the Pediatric Population
- The Association of Heterozygous p.R4810K of RNF213 and Long-Term Unfavorable Outcomes after Encephaloduroarteriosynangiosis in Chinese Pediatric Patients with Moyamoya Disease
- Clinical Course, Therapy, and Long-Term Outcomes of Children With Moyamoya Disease and Posterior Cerebral Artery Involvement
- Effects of goal-directed analgesia using the analgesia nociception index in children undergoing surgery for moyamoya disease: A randomised controlled trial
- Indirect revascularization for pediatric moyamoya disease
- Indirect Bypass With Pericranial Transposition for Moyamoya Syndrome in an Infant
- Revascularization Surgery for Moyamoya Vasculopathy: An Australian Experience

EDAS/encephalomyoarteriosynangiosis (EMAS) provides a stroke-prevention benefit with an acceptably low morbidity rate. Given the combined experience with EDAS and EMAS for this indication at this and other institutions, a prospective clinical trial to assess their efficacy compared with that of chronic transfusion therapy alone is warranted [1].

Case series

Six children underwent 8 EDAS procedures and were followed from 6 months to 9 years after surgery. No patient experienced further deterioration in neurologic status. Postoperative angiography demonstrated cerebral revascularization from the donor scalp artery on 3 of the 6 EDASs that were studied. The 2 patients who did not revascularize after EDAS demonstrated angiographic regression of their disease. The data suggest that EDAS is a safe procedure for the treatment of childhood moyamoya disease. Given the potential severity of the sequelae, early operative intervention is recommended in all children with this disease [2].

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Griessenauer CJ, Lebensburger JD, Chua MH, Fisher WS 3rd, Hilliard L, Bemrich-Stolz CJ, Howard TH, Johnston JM. Encephaloduroarteriosynangiosis and encephalomyoarteriosynangiosis for treatment of moyamoya syndrome in pediatric patients with sickle cell disease. J Neurosurg Pediatr. 2015 Jul;16(1):64-73. doi: 10.3171/2014.12.PEDS14522. Epub 2015 Apr 3. PubMed PMID: 25837886.
2)
Ross IB, Shevell MI, Montes JL, Rosenblatt B, Watters GV, Farmer JP, O'Gorman AM. Encephaloduroarteriosynangiosis (EDAS) for the treatment of childhood moyamoya disease. Pediatr Neurol. 1994 May;10(3):199-204. PubMed PMID: 8060421.