

البحث السادس

عنوان البحث

Deconstructive versus reconstructive endovascular approaches for intracranial dissecting aneurysms

Abstract

Background: The annual incidence of the intracranial dissecting aneurysms is about 1 to 1.5 per 100,000. This is a well-known cause of stroke and subarachnoid hemorrhage in young and middle-aged patients (Santos-Franco et al. in *Neurosurg Rev*, 2008. <https://doi.org/10.1007/s10143-008-0124-x>). Various surgical and endovascular treatment methods have been proposed for intracranial dissecting aneurysms. All treatment methods aim to reduce the blood flow in the dissected region. Deconstructive techniques sacrifice the parent artery, whereas reconstructive techniques aim to maintain a parent artery (Stéphanie et al. in *Lancet Neurol* 14(6):640–654, 2015. [https://doi.org/10.1016/S1474-4422\(15\)00009-5](https://doi.org/10.1016/S1474-4422(15)00009-5)). Due to its dissecting nature, wall friability can make surgical clipping difficult and even risky. On the other hand, recanalization after coiling alone is almost certain. Therefore, deconstructive modalities of treatment like trapping or parent vessel occlusion, performed either surgically or endovascularly, have predominated for managing those lesions, usually with good results. Nevertheless, in absence of efficient collateral pathways, the deconstructive technique carries an ischemic risk. In situations in which parent artery preservation is mandatory, the use of stent-assisted techniques may be the most appropriate choice (de Barros Faria et al. in *Am J Neuroradiol* 32(11):2192–2195, 2011. <https://doi.org/10.3174/ajnr.A2671>). However, the usage of stent with recently ruptured aneurysms is always perplexing due to the necessity of dual antiplatelet administration. Hence the management of dissecting aneurysms remain challenging. Results: Between January 2017 and July 2019, 19 patients presenting with intracranial dissecting aneurysms were referred to our department for endovascular treatment. Among the nineteen patients, 11 cases were treated by parent artery occlusion representing 57.9% of the cases, and 7 cases (36.8%) were treated by artery preserving technique, and only one case (5.3%) was treated by combination of parent artery occlusion and artery preserving technique. One week after the intervention 26.3% of patients had no disability (mRS=0), 47.4% had no significant disability (mRS=1), 15.8% had slight disability (mRS=2) and 10.5% had moderate to severe disability (mRS=3–4). After three months we found an overall improvement of the clinical outcome, as 57.9% of patients had no disability (mRS=0), 26.3% had no significant disability (mRS=1) and 15.8% had mild disability (mRS=2). Finally, after six months reassessment with angiography showed that 89.5% of patients had stable aneurysmal occlusion, and 10.5% had recurrence of aneurysm