

PP48

Multiple burr holes procedure in Moya-Moya disease

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Introduction: Moya Moya is a chronic illness of unknown aethiology caused by progressive stenotization and finally occlusion of the main cerebral arteries. In the same time rich net of collateral arterial suply usually comes out. In pediatric population the first manifestation is obviously not intracerebral haemorrhage like in adults but mainly an ischemic attack. The basic modality of treatment is nowadays revascularisation as the causative solution is nos feasible. For older children and adults the high flow bypass is the treatment of choice, for younger babies the undirect revascularisation serves as the most suitable method. The goal of the surgery is reconstitution of blood flow in middle cerebral artery through the superficial temporal artery, dura or temporal muscle. The more recent possibility is taking advantage of multiple burr holes that results in wider range of cerebral revascularisation.

Method: The authors present a case report of one female patient with Moya Moya disease treated with above mentioned method of multiple burr holes surgery. The pros and cons of this approach are discussed.

Results: The patient is now 5 years after the surgery in good condition with stable neurologic disablement, she suffered no other ischemic stroke since the surgery.

Conclusion: The multiple burr holes procedure offers wider range of revascularisation with low surgical morbidity in comparizon with the standard procedures like EDAMS. The main advantage is further the smaller risk of vascular damage, diminished risk of chronic subdural haematoma evolution and chance for the bilateral surgical approach. The disadvantage is potential CSF leak and the necessity for larger craniotomy.