

A Moyamoya Case Report On A Patient With Slurred Speech And Right-hand Weakness.

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Background:

Moyamoya angiopathy (MMA) is a cerebrovascular disease affecting about one in a million people. It is characterized by progressive stenosis of the terminal portion of the internal carotid arteries leading to cerebral hypo-perfusion which in turn induces neo-angiogenesis in the deep parts of the brain. Patients are predisposed to ischemic and hemorrhagic strokes. Diagnosis is usually made with magnetic resonance imaging (MRI) and a magnetic resonance angiogram (MRA) to evaluate the brain and its blood vessels. Symptomatic patients should undergo surgical interventions. A few studies have shown that the superficial temporal artery to middle cerebral artery bypass combined with encephalo-duro-myosynangiosis (EDMS) can achieve a good therapeutic effect in the treatment of Moyamoya disease.

Case Presentation:

A 39-year-old right-handed lady with a history of chronic headaches, a lacunar infarct of the left basal ganglia, and recently diagnosed with Moyamoya disease presented to the ED due to slurred speech and right-hand weakness. On neurological evaluation, the patient was alert and oriented with a flat affect. Her cranial nerves were grossly intact, and sensory functions were preserved. She only had mild fine motor coordination deficits. Imaging showed no acute changes. The patient was already on maximum medical management with dual antiplatelet therapy and had an unsuccessful endovascular revascularization. Plastic surgery and Neurosurgery were consulted, and she underwent a left frontoparietal craniotomy for superficial temporal artery to middle cerebral artery bypass with concurrent EDMS. A post-surgical angiogram evaluating the carotid artery bypass showed good blood flow. A CT scan without contrast showed surgical changes from recent parietal craniotomy with a small amount of pneumocephalus on the left and minimal hemorrhage in the subdural space which was expected post-surgery. There was no evidence of mass-effect, midline shift, or parenchymal hemorrhage. The patient was stable and discharged to inpatient rehabilitation.

Conclusion:

Our patient showed how a joint bypass procedure and EDMS provided efficient revascularization and helped achieve a good therapeutic effect with very few complications. Moyamoya is a rare disease with small evidence published on effective treatments. This case highlights the surgical treatment protocol for Moyamoya disease as an effective way to improve the short- and long-term outcomes.

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