Repeated large vessel occlusion in a young adult

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Abstract

Background: Ischemic stroke in young adults is reported as uncommon, comprising less than 10% of all stroke patients. Therefore, these patients constitute a diagnostic challenge, many of them with no risk factors for atherosclerosis and no clear etiological diagnosis even after a thorough investigation.

Methods: We describe a case of a young female who was submitted to multiple endovascular treatments, with recurrent right middle cerebral artery (MCA) occlusion. The aetiology is not yet totally clarified.

Results: We report a case of a 42-year-old woman, with personal history of migraine, on oral contraceptives. She was admitted at our hospital 45 minutes after a sudden onset of anosognosia, right oculocephalic deviation, left hemianopia, left central facial palsy, dysarthria and left hemiparesis and hemihypoesthesia, scoring 13 points on the NIHSS. Computed tomography (CT) showed no signs of acute vascular lesion and CT-angiography revealed right MCA occlusion, at the M1 segment. IV thrombolysis with rt-PA was started, and the patient was taken to the angiography suite. Occlusion of the proximal right M1 segment was confirmed, as well as a small ulceration with a non-occlusive thrombus in the right internal carotid bulb. A favourable recanalization was achieved using aspiration. After the procedure, clinical improvement was noticed, but minutes later, a new onset of the previous deficits occurred. Transcranial Doppler (TCD) study showed a re-occlusion of the right M1 segment. Immediately, a new thrombectomy procedure was performed, again with favourable recanalization - TICI 2C. Microembolic signals were observed during the transcranial doppler monitoring (TCDM), and considering the internal carotid wall changes, IV eptifibatide was started. Follow-up MRI at 24 hours showed multiple acute ischemic lesions in the right MCA territory. On the third day of hospitalization the patient presented with the previously described deficits, and TCDM showed a right M1 occlusion. A new angiography was performed, showing a focal stenosis of M1. IA vasodilators were administered with resolution of the stenosis. A complete etiological study was carried out, yielding a small patent foramen ovale. The main diagnostic hypotheses of carotid disease or intracranial dissection were excluded. The patient was discharged with aspirin 100mg/daily. Final NIHSS at discharge was 3, and mRS at 3 months was 2.

Conclusion: Although ischemic stroke is a widely studied pathology, sometimes there are clinical cases difficult to approach and treat. Large vessel reocclusion should not be contraindicated for a new endovascular approach, and may favourably modify the prognosis.

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