Severe stenosis of both ICA and basilar artery, in a patient with acute symptoms of different territories—how to manage

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Abstract

Clinical Case: A previously independent 77-year-old man, with history of ischemic cardiac disease, hypertension, diabetes and smoking and drinking habits, was recently hospitalized for transient episodes of pre-syncope, dysphagia and left hemiparesis. MRI showed acute ischemic lesions in the territory of the left middle cerebral artery (MCA). The CT-angiography revealed bilateral severe internal carotid artery (ICA) stenosis, stenosis of the M1 segment of the right MCA and V4 segments of both vertebral arteries (VA) and also pre-occlusive stenosis of the basilar artery (BA). Double anti-platelet therapy was initiated and bilateral carotid stents were placed. At discharge, the patient was asymptomatic but returned 4 days later for fluctuating right brachial paresis, four limbs dysmetria and horizontal-rotational nystagmus. Doppler studies confirmed severe stenosis of the BA, with both carotid stents patent. Hypoperfusion of the vertebrobasilar territory was admitted and after multidisciplinary discussion, mechanical angioplasty and stenting of the BA was performed. However, because of further clinical worsening, MRI was made and revealed multiple acute ischemic lesions of the anterior left territory and posterior territory, with occlusion of the left ICA stent and BA, with all intracranial circulation dependent on anastomosis from the right ICA. The patient was clinically stable and was maintained on aspirin and ticagrelor.

Conclusions: This case raises several important questions: indications for endovascular therapy in multiple stenosis/occlusions, timing of treatment in multiple stenosis and the ideal double anti-platelet scheme.