



POSTER

Acute ischemic stroke and severe bilateral internal carotid stenosis: a double dilemma

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Abstract

Background: Carotid artery stenosis is a significant cause of ischemic stroke with a high risk of recurrent vascular events. Carotid artery stenting (CAS) is a minimally invasive alternative to endarterectomy and has largely emerged as a treatment option over the past decade. Bilateral carotid artery stenting is generally treated by staged stenting procedure and rarely simultaneously.

Clinical case: The authors report the case of a 73-year-old man with history of hypertension, dyslipidaemia and chronic alcohol intake, who acutely developed a left central facial palsy, dysarthria and left hemiparesis and hemihypoesthesia, scoring 21 points on the National Institute of Health Stroke Scale (NIHSS). Computed tomography (CT) showed no signs of acute vascular lesion. CT-angiography revealed occlusion of the right extracranial internal carotid artery (ICA) and additional middle cerebral artery (MCA) thrombus, at the M1 segment. Intravenous thrombolysis with rt-PA was started, and the patient was transported to the endovascular center. At admission he presented neurologic improvement (NIHSS17) and repeated CT that showed ischemic lesion on the right middle cerebral artery territory (ASPECTS 5). After the evaluation of the risks and the benefits, it was decided to perform cerebral angiography. This showed tandem occlusion of the proximal segment of right ICA (atherosclerotic plaque and thrombus) and occlusion of left distal ICA (intra-cavernous segment). Mechanical thrombectomy was performed and

carotid stent was placed on the right ICA with satisfactory reperfusion - TIC1 3. The patient was subsequently admitted to the stroke unit where he started double antiplatelet therapy with ticagrelor and aspirin. Close clinical monitoring showed neurologic improvement at 24 hours – NIHSS 6. Control brain CT was performed 24 hours later and showed infarct in the right MCA territory, as well as petechial haemorrhagic transformation. Carotid ultrasound confirmed severe left ICA stenosis with hemodynamic repercussion in the left ophthalmic artery and left MCA. On the third day after admission a brain MRI was performed and showed acute infarcts in the right middle cerebral artery territory, a left border-zone infarct and left hemispheric hypoperfusion. MRI-angiography revealed sub-occlusion of the left ICA. It was decided to perform left carotid artery stenting, followed by mechanical angioplasty with intra-stent balloon with satisfactory reperfusion. The neurosonological study was repeated and confirmed stents patency. The patient was discharged with neurological improvement (NIHSS 2) and maintained under double antiplatelet therapy.

Conclusion: We would like to discuss the best management in this case, namely among the following options: maintain double antiplatelet therapy and close monitoring or proceed to endovascular (CAS) or surgical treatment of carotid stenosis immediately. We want to discuss the safety and efficacy of the bilateral CAS in patients with acute stroke.

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