Acute ischemic stroke and unruptured aneurysm: what now?

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Abstract

Introduction: Unruptured cerebral aneurysms are currently considered a contraindication to thrombolytic therapy for acute ischemic stroke, due to its theoretical increase in the risk of haemorrhage from aneurysm rupture.

Results: A 51-year-old female presented at the Emergency Department with a sudden language change. Past history was relevant for dyslipidaemia treated with simvastatin and regular consumption of pharmacologic preparations intended for weight loss. The initial observation revealed mild aphasia, flattened right nasolabial fold and right mild hemiparesis with mild sensory loss (NIHSS 5). Brain CT scan was normal and CT angiography revealed a probable occlusion of the Sylvian branch of the left middle cerebral artery (M3 segment) and a saccular aneurysm of the anterior communicating artery with approximately 8mm. Given the minor and regressing clinical picture and the presence of an aneurysmal formation, it was decided not to treat with thrombolytic therapy. At the Stroke Unit, a brain MRI revealed multiple acute ischemic lesions in several arterial territories suggestive of an embolic source. Her EKG monitoring remained always in sinus rhythm. Transthoracic echocardiogram revealed a slightly dilated left atrium and mild-to-moderate aortic insufficiency. Transesophageal echocardiogram showed no additional relevant changes. Extracranial and transcranial ultrasounds were normal. At discharge, she maintained some degree of anomic pauses and paraphasia with mild slurring of speech, mild flattened right nasolabial fold and loss of right-hand fine motor skills with mild sensory loss of the right lower limb (NIHSS 4). The aetiology of these changes remains unknown. She was released with combined clopidogrel-aspirin and a plan for readmission 3 weeks later for aneurysm endovascular treatment.

Conclusion: This case illustrates the difficulty in deciding stroke acute-phase treatment when aneurysms with more than 5mm are identified, due to the uncertainty on intravenous alteplase safety in the treatment of these patients.