Is acute-onset stuttering a focal neurologic sign?

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Abstract

Introduction: Stuttering has been defined as speech dysfluency characterized by involuntary repetitions and prolongations in syllables and words sounds. Acquired stuttering can have a neurogenic etiology, usually following dominant hemisphere stroke.

Case Report: A 55-year-old right-handed woman, with history of multiple cardiovascular risk factors and target-organ damage – bilateral atherosclerotic carotid disease, symptomatic on the right, for which she was submitted to endarterectomy six years before and three-vessel coronary artery disease treated by percutaneous coronary intervention three years earlier – presented to the emergency department for acute-onset speech disorder at wake-up. On admission she presented stuttering, with preserved naming/repetition/comprehension, and a previously known left claw hand, possibly secondary to post-traumatic ulnar neuropathy (NIHSS 1). Cranial computed tomography (CT) showed non-recent ischaemia in cortico-subcortical right fronto-parietal region, without acute ischaemic signs; angio-CT displayed occlusion of left common carotid artery with patency of ipsilateral internal carotid artery (ICA) and right ICA stenosis >80%. She received an antiplatelet loading dose and was admitted to our stroke unit. Brain magnetic resonance imaging revealed the non-recent infarction in the right anterior/middle cerebral artery watershed area, surrounded by foci of acute ischaemia with restriction to water diffusion. A symptomatic right ICA re-stenosis was assumed; she started double antiplatelet therapy and was submitted to carotid angioplasty with stenting.

Conclusion: Acquired neurogenic stuttering is more often reported after dominant hemisphere and subcortical lesions, rather than in cortical speech and motor regions. However, this case shows that acquired stuttering may result from non-dominant cortical infarction. Thus, we cannot consider stuttering a focal neurological sign.