

Neurologists should not blame emergency physicians for stroke mimics, but train them to identify chameleons

Neurologistas não devem culpar médicos emergencistas pelos mimetizadores do acidente vascular cerebral, mas treiná-los a identificar camaleões


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In this issue of *Arquivos de Neuro-Psiquiatria*, Ifergan et al.¹ showed that of 736 patients admitted for an acute neurological disorder who underwent a CT- or a MRI-scan in emergency over a 2-year period, almost half did not show brain lesions suggestive of ischaemic strokes. They considered them as having stroke mimics. One hundred and two of them had either intra-cerebral haemorrhages (ICH) or transient ischaemic attacks (TIA). If we consider that these 102 additional patients did not really meet criteria for stroke mimics, the proportion of stroke mimics is reduced at 33.8%. ICH are not stroke mimics because they are strokes. They need an accurate diagnosis in emergency, and require a treatment when appropriate, such as a rapid lowering of systolic blood pressure under 140 mmHg, the only treatment able to increase the proportion of independent survivors after ICH besides stroke unit care². Accordingly, TIA cannot be regarded as mimics because there is a large spectrum of severity in cerebral ischaemia, and because selected patients with TIA or minor strokes may benefit from thrombolysis³ and all will benefit from specific secondary prevention measures⁴. The rate of mimics seems high in this study, but the initial diagnosis did not include the results of imaging. As nobody will give rt-PA or perform a thrombectomy without brain imaging, it would probably be more appropriate to define mimics as symptomatic non-vascular brain pathologies that remain underdiagnosed after the first imaging performed in emergency in patients whose clinical presentation suggests a stroke.

The authors present mimics as problems, but is there really a major issue in practice? Probably not because a false positive diagnosis of stroke is not likely to harm the patients: they will be assessed in emergency, which will often be useful, because mimics are usually other neurological disorders needing an urgent management^{5,6}. They are not likely to undergo mechanical thrombectomy because they have no large-vessel occlusion. They may receive an inappropriate treatment with rt-PA, but in this case, they have a very small risk of complication^{5,6}. Finally, the only problem with mimics is an inappropriate use of available facilities⁷. Is this really a major problem? Is it a problem for cardiologists to admit in coronary units patients with functional disorders or thoracic pain of other causes than coronary syndromes? No, because they identify easily these patients and refer them to another ward. Why should it be different for stroke?

Stroke chameleons are additional serious issues in emergency practice⁷. They are false negative, i.e., undiagnosed strokes. They may have the presentation of acute peripheral vertigo, peripheral nerve palsy, seizure, movement disorders, acute behaviour disturbances, and so on. These patients are identified with delay and do not benefit from reperfusion therapies, or are not identified at all and do not benefit from secondary prevention measures⁷. Are they frequent? We do not know exactly because they are not identified, and it is not possible to recruit in studies patients who are not identified!

The message we would like to deliver is that we should never blame emergency physicians because they refer stroke mimics to a stroke unit. What we expect from emergency physicians is not to be specific in their diagnosis, but to be sensitive. Those who never

refer a patient for a mimic are more dangerous because they miss strokes. It is part of the job of neurologists to identify patients erroneously considered as having a stroke by emergency physicians. It is more important for

emergency physicians to be trained to identify chameleons because they are the only physicians on the scene at this stage and, if their diagnosis is wrong, there is really a risk to harm the patient⁷.

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