

# Stroke care conditions in Brazil: can it still get worse?

As condições para atendimento do acidente vascular cerebral no Brasil: ainda pode ficar pior?

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Dear Editors,

We read, with special interest, the article *Medical perception of stroke care conditions in Brazil* by Gagliardi et al.<sup>1</sup>, published in the January issue of *Arquivos de Neuro-Psiquiatria*. As neuroradiologists with a special interest in this area, we definitely agree with the major concerns of the study's neurologists.

Unfortunately, we can assume that future conditions may get worse. With the results of the new trials<sup>2,3,4,5,6</sup> published over the past few years, public services will need to restructure their already scarce infrastructure. Currently, it is imperative to provide a neurointerventional treatment when an obstruction in the proximal middle cerebral artery has been demonstrated. In this setting, a careful selection of patients with adequate neuroimaging techniques is even more essential.

Brain non-contrast computed tomography (CT) is no longer enough. Angiographic CT (ACT) studies, which require powerful scanners and intravenous contrast administration, in addition to a careful interpretation, have been increasing diagnostic complexity. Providing an efficient emergency admission, with an available neurointerventional team and infrastructure (24 hours a day, seven days a week), is an additional challenge.

We also agree that it is well established that diffusion weighted-images better define the ischemic core in a

hyperacute stroke setting. However, for practical purposes, until six hours after the ischemic ictus, these patients may reliably be identified by CT, as already demonstrated in previous trials. Therefore, considering costs, expertise and availability of an already-trained team and fast imaging acquisition, brain CT with ACT remains the more acceptable tool to provide fundamental data to make the best decision in this scenario.

Furthermore, some stroke teams have already considered other requirements. The current literature<sup>7,8</sup> has assessed the use of brain perfusion to select patients with relevant clinical deficit and imaging mismatch, in order to provide endovascular treatment beyond the classic window (> 6 hours). However, perfusion software remains expensive and relatively complex in its use. Despite that, it emerges as an option to increase the number of treated patients, including those currently neglected. New advances, increased costs. How to deal with this?

Definitively, primary stroke centers of the past must move on to become more balanced. While our centers need to be updated in their infrastructure, properly-trained, multiprofessional teams must be nimble and efficient when attending to patients. Besides that, costs must be acceptable to the health system. In other words, there is a long way to go, particularly in underdeveloped countries.

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