

Following the road of progress in acute ischemic stroke care

Seguindo o caminho do progresso no tratamento do AVCI agudo

Paulo Puglia Junior¹

¹Universidade de São Paulo, Faculdade de Medicina, Hospital das Clínicas, Instituto de Radiologia, Neurorradiologia Vascular, São Paulo SP, Brasil.

Correspondence:

Paulo Puglia Junior; Rua Inácio Pereira da Rocha, 486; 05432-011 São Paulo SP Brasil; E-mail: ppuglia@yahoo.com

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After decades of delay, if compared to other medical emergencies like myocardial infarction, knowledge about stroke finally achieved a grade that allows intervention to change its natural history. That has been a long road.

The acute stroke phase comprises the first few hours, when the potential maximal lesion is not necessarily established yet, creating a time window for intervention.

The use of the intravenous rt-PA is the standard treatment for acute ischemic stroke, with evidence of its benefits for eligible patients. One of the advantages of this approach is the possibility of intervening soon after the patient was assessed. Despite this advantage, only a small proportion of patients benefit from intravenous t-PA, mainly due to its short therapeutic window (≤ 4.5 hours) and poor performance in large vessel occlusion.

Intra-arterial thrombolysis via catheter (IAT) has been performed for more than 30 years, as an alternative or as an adjunctive treatment, but its exact role was not clear until recently, despite teams involved had a positive impression about results, at least in part of patients. New devices were developed to extract the thrombus without or after pharmacological intervention, but the evidence of its benefit remained lacking. In 2013 three negative trials put IAT in great doubt¹.

The question had a turning point in 2015, when new randomized clinical trials showed that intra-arterial thrombolysis alone or in combination with IV t-PA was superior to IV t-PA alone, in a selected population of patients harbouring large vessel occlusions².

Additionally, these trials revealed a set of indicators of performance, which improvement is associated with better outcomes, like frequency of complete recanalization and time needed to achieve it.

Part of the effort to improve outcomes by improving the IAT indicators is reported in the present issue³. The possibility of a quicker and more frequent complete vessel recanalization is welcome, along with more widespread availability of these treatment tools in the public hospitals, more information to make patients seek help earlier and better recognition and processes of investigation in the emergency rooms. There is a long road of continuous progress in stroke care.

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