

A new era of endovascular treatment for acute ischemic stroke: what are the implications for stroke care in Brazil?

Uma nova era de tratamento endovascular para o AVC isquêmico: quais são as implicações para o Brasil?

In Brazil, stroke has been a neglected disease and the first cause of mortality for decades¹. After recent advances on stroke policies and practices, stroke has now dropped to the second cause of mortality^{1,2,3,4}. A small victory, but we are still far from winning the war against this condition. Less than 1% of stroke patients in Brazil have access to intravenous thrombolysis and admission to a stroke unit¹. In this context, how are we to face the dawn of a new era of endovascular therapy (EVT) for ischemic stroke?

Five recent clinical trials (MR CLEAN, EXTEND-IA, ESCAPE, SWIFT-PRIME and REVASCAT) conveyed clear evidence that EVT produces massive clinical benefits to selected stroke patients⁵. Taken together, these results establish a new standard-of-care for around 20% of stroke patients, those with a proximal artery occlusion. Nevertheless, some additional corollaries need to be considered in Brazil⁶.

First, these exciting results were obtained at high-volume comprehensive stroke centers with large experience with stroke therapy with TPA (including telemedicine) and full-time stroke teams (with a stroke neurologist), angiography suite and multimodal neuroimaging. The reproducibility of their results in our healthcare system requires organizing efficient stroke networks, able to identify candidates for EVT and promptly refer them to comprehensive stroke care center. This poses a special

challenge in Brazil, given its continental dimensions, geoeconomical disparities, and paucity of such comprehensive stroke units. We also need to train a new generation of stroke neurologists and interventionalists.

Secondly, the underlying selection paradigm differed widely among trials, from being extremely restrictive in selecting patients (*eg*, EXTEND-IA) to a more pragmatical (MR CLEAN and REAVASCAT) approach (Figure). Different solutions will depend on resource availability and local expertise. New national stroke guidelines are welcomed and should provide a comprehensive backbone for the implementation of selection criteria nation-wide.

Finally, it is crucial that cost-effectiveness analyses are conducted while the treatment is made available. The net impact of EVT in the Brazilian scenario is likely to be huge, given the more severe profile of our stroke patients. A joined effort of the Brazilian stroke community is necessary to expedite the translation of scientific evidence to clinical practice in order to avoid the repetition of historic mistakes, such as the unacceptable delay for approval of public reimbursement of intravenous thrombolysis within the public health care system, which only happened almost 17 years after the publication of the NINDS trial.

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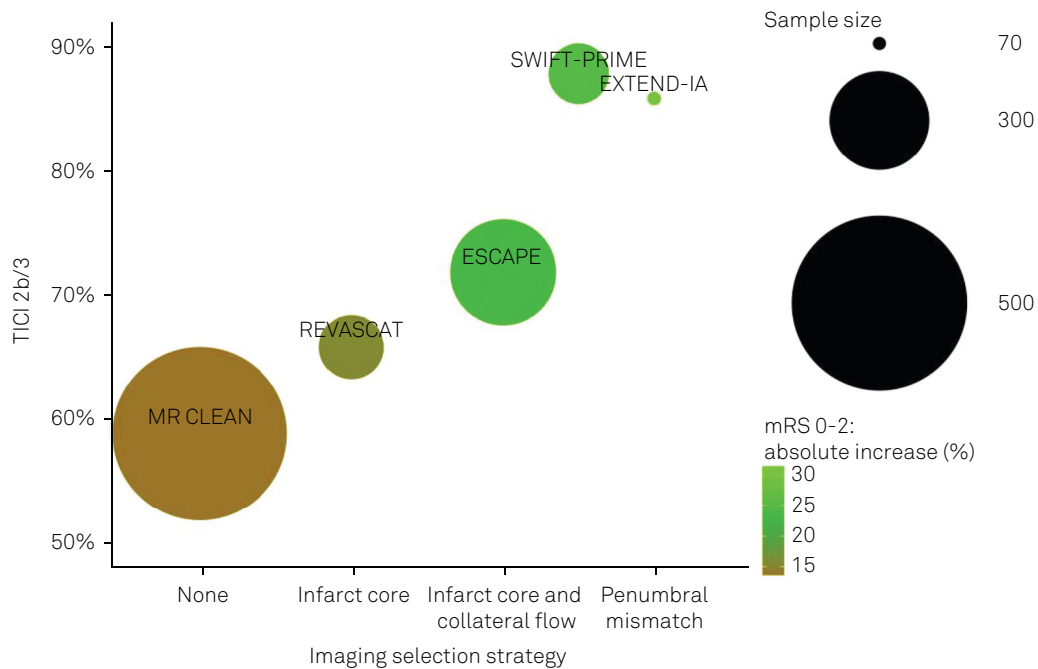


Figure. Effect size of endovascular therapy (absolute increase in rate of independence in the modified Rankin Scale, mRS) as a function of neuroimaging selection strategy and complete reperfusion rates (Thrombolysis in Cerebral Infarction, TICI, 2b-3) in the most recent clinical trials.

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