Clot Retrieval for Stroke
‘Yes We Can,’ but Priority for Trials and Registries
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Few controversies have generated as much heat as the questions surrounding the role of clot retrieval. A core issue in this debate is the licensing of clot retrieval devices based solely on Phase II evidence. Our protagonists have excelled themselves in fueling the debate; as always, we will take a measured middle ground!

In our careers, the proof of efficacy of intravenous tissue plasminogen activator has been an enormous advance, in large part because of the conclusive evidence of benefit and safety generated by a series of well-performed Phase III trials. Evidence-based medicine at its best! Given the relative simplicity of intravenous tissue plasminogen activator administration, this is likely to remain the first-line standard treatment.

However, in a comprehensive stroke center with a neurointerventional service, many would consider opening an occluded artery in a number of clinical scenarios. For example, when there is a proximal internal carotid artery occlusion within the 4.5-hour time window, when this time window is only modestly exceeded, particularly when penumbral imaging indicates the presence of substantial viable tissue or when there is no apparent response to tissue plasminogen activator although there is evidence of persisting arterial occlusion. In radiology review sessions with our colleagues and residents, successful recanalization is often impressive but may not be matched by a parallel clinical benefit. It is important that those of us referring patients for clot retrieval are forthright in their recognition of these uncertainties. The analogy with carotid stenting made by Schellinger and Hacke has validity.

We do acknowledge that in a number of countries, the interventional cat is out of the bag and widespread unaudited clot retrieval is an expanding industry, in part driven by financial incentives. Unmonitored practice can be perceived as a threat, it is also an opportunity. As a minimum, we believe that all patients should have their data (including clinical indication, baseline imaging, time window, modality used, concurrent lytic therapies, mortality and symptomatic hemorrhage rate, recanalization success, and clinical outcome) recorded in a national or international registry. This should be the responsibility of investigators and national licensing bodies.

This does not in any way minimize the need for Phase III clinical trials to define the role of clot retrieval. We agree with Furlan that catheter-based trials are a methodological challenge. We should remember that these logistic issues have been successfully overcome by our cardiological colleagues and have been validated by Phase III trials for coronary artery occlusion.1 For acute stroke, we also agree that such trials will necessitate academic–industry collaboration on an international level and should take into account the heterogeneity of stroke in their design.2 Using these principles, we believe that such trials would be achievable. To quote President Barack Obama, “Yes, we can!” but registries and Phase III trials are essential.

Disclosures
None.

References

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