Letter to the Editor

Stroke welcomes Letters to the Editor and will publish them, if suitable, as space permits. Letters must reference a Stroke published-ahead-of-print article or an article printed within the past 3 weeks. The maximum length is 750 words including no more than 5 references and 3 authors. Please submit letters typed double-spaced. Letters may be shortened or edited.

To the Editor:
Intra-arterial therapy for large vessel stroke is not yet an evidence-based treatment, but the new stent retrievers hold great promise because of high recanalization rates. We read with interest the study by Nguyen et al,1 in which it is found that the use of a balloon guide catheter along with a stent retriever results in higher rates of good outcome. The balloon guide catheter is inflated proximal to the lesion, thus stopping antegrade flow while extracting the stent retriever with the clot. The suggested cause for better outcome is the lower probability for distal embolization.
We would like to suggest an alternative explanation. Occluding the feeding artery to an organ and making the organ ischemic for a shorter time has been shown to protect the organ against further ischemia. This is seen in both the heart2 and brain3 and is referred to as conditioning. More enigmatically, there is also a protective effect in the heart if another organ (eg, the arm) has been made ischemic by inflating and releasing a blood pressure cuff multiple times. This is referred to as remote ischemic conditioning and has been shown to protect myocardial tissue during ST-segment–elevation myocardial infarct.4 The mechanism of action would be in the form of a substance released by ischemic cells that then serves as a protective hormone elsewhere in the body.
Whether this also holds true in acute ischemic stroke is examined in a newly published study, in which a small but beneficial effect was seen.5
When the balloon guide catheter is inflated, it most likely not only protects the vascular bed against distal embolization, but also makes the vascular territory ischemic and results in the release of substances that serve as protective agents in the ischemic tissue. It is likely that some of the reason behind the improved outcome rates after the usage of the balloon guide catheter can be related to a conditioning effect.

Disclosures
None.

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References

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Letter by Simonsen et al Regarding Article, "Balloon Guide Catheter Improves \nRevascularization and Clinical Outcomes With the Solitaire Device: Analysis of the \nAmerican Solitaire Acute Stroke Registry"
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