Letter to the Editor

Pretreatment With Intravenous Thrombolysis

We read with great interest the recent article by Tsivgoulis et al demonstrating that endovascular thrombectomy (ET) improves the functional outcome of patients with emergent large-vessel occlusion (ELVO) independent of pretreatment with intravenous thrombolysis (IVT). As a consequence, ET could now be viewed as a treatment option on its own and should therefore be considered for patients with acute stroke in the early steps of the management process even if they do not qualify for IVT. This could help to further reduce the time to recanalization which is a key determinant of functional outcome at 3 months. Moreover, these results support the current clinical practice of offering ET alone to patients presenting with contraindications to IVT or having a high burden of cerebral microbleeds.

On reading the article by Tsivgoulis et al, our younger colleagues involved in the first-line management of patients with acute stroke raised the following question: “Is it still worth starting IVT for stroke patients that could be readily offered ET?” The question highlights a clear risk of misinterpreting the statement that “No significant effect of IVT pretreatment on the 3-month functional outcome of patients with ELVO undergoing ET was found.” The results show that the strength of the association between ET and good functional outcome was not significantly influenced by pretreatment IVT given that the 95% confidence intervals of the odds ratio in both groups (IVT versus no IVT) were widely overlapping. However, this should be interpreted with caution for 2 major reasons. First, in the no IVT group, the effect size is artificially increased because patients undergoing ET are compared with those receiving best medical therapy alone, whereas in the IVT group, the effect size is artificially decreased because patients undergoing ET are compared with those receiving IVT who are already known to have a better functional outcome when compared with patients receiving best medical therapy alone. Therefore, the expression standard treatment does not refer to the same reality in both groups, and this could explain why comparable odds ratios have been obtained. Second, as acknowledged by the authors, patients with ELVO were not randomized for receiving IVT+ET or ET alone meaning that the results could simply reflect a difference in the baseline characteristics of patients included in both arms.

Considering the above, we would conclude that, while waiting for a randomized trial comparing IVT+ET to ET alone in patients with ELVO, IVT should always be started as early as possible for all eligible patients with stroke without delaying access to ET. Indeed, it has been demonstrated that patients receiving IVT+ET have a better outcome than those receiving IVT alone, especially when they have ELVO for which IVT usually has few or no benefit. Besides the 3-month functional outcome and the bleeding complications, a randomized trial should also address the influence of pretreatment IVT on time to recanalization because of a reduction of the number of passages needed to restore a normal flow. The latter might influence the rate of peri- or post-ET complications and the outcome.

Disclosures

V.M. Pereira is consultant for Medtronic as principal investigator for the Solitaire FR Thrombectomy for Acute Revascularisation (STAR), Solitaire With the Intention for Thrombectomy as Primary Endovascular Treatment Trial (SWIFT PRIME), and SWIFT DIRECT studies and consultant for Stryker as steering committee member for the Trevo and Medical Management Versus Medical Management Alone in Wake Up and Late Presenting Strokes (DAWN) trial. The other authors report no conflicts.

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Letter by Kamtchum-Tatuene et al Regarding Article, "Mechanical Thrombectomy Improves Functional Outcomes Independent of Pretreatment With Intravenous Thrombolysis"
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