Alteplase for Patients With Ictus:  
the Dilemma Persists

To the Editor:
Therapeutic usefulness of alteplase in patients with ischemic stroke is a complex topic. Perhaps some clinical trials with good methodology exist; they are very different in patients, treatment and results.

From a wide point of view, as of the Wardlaw et al metaanalysis, alteplase administration could increase all-cause mortality in 1.9% (95% CI, −0.6% to 4.8%). In spite of this, it favors recovery from stroke, so 5.5% more patients become dependence-free (number needed to treat=18; \( P<0.05 \)). Although that possible rise in mortality (consequence of cerebral hemorrhage as a thrombolysis effect) does not reach statistical significance in the metaanalysis, a statistically significant increase of fatal cerebral hemorrhage in 2.5% of patients (\( P<0.05 \)) has been shown.

This presents a dilemma because we could improve likelihood of recovery, but along with a life-threatening hazard. Probably thereby, alteplase treatment is not so widely spread as some authors expected (<5% of ischemic stroke patients receive it in the United States).\(^2\) Besides, as heterogeneity of results is high among studies, it is usually accepted to follow inclusion criteria of the study that show a wider pool of evidence favorable to alteplase use.\(^3\) That study (NINDS)\(^4\) is the pivotal clinical trial for this indication approval at FDA, a very strict study with 0.9 mg/Kg (maximum 90 mg) dose of alteplase, in patients with no more to 180 minutes from arise of symptoms (with a standardized time stimation), exclusion for age, historial and diagnostic matters, including CT to exclude hemorrhagic stroke, as well as intense standardized hypertension management, lowering hemorrhagic risks. It has been estimated that <10% of patients with ischemic ictus coming into emergency wards would fulfill those inclusion criteria for receiving alteplase.\(^5\) If criteria are not strictly followed, risks are clearly present and benefits decrease, as it is seen in the ECASS trial.\(^6\)

A recent descriptive study (SITS-MOST,\(^7\)) shows how data from daily clinical practice in the United Kingdom resemble selection of patients and results from clinical trials. This may reassure us but must not be assumed as a reason for reducing or relaxing patient selection and management criteria for alteplase treatment. And the dilemma persists.

Disclosures

None.

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