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Of people admitted within 2 h of mild/improving stroke, 31% do not receive rtPA, although many of these people have poor outcomes

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Context

Few patients with acute ischaemic stroke receive intravenous recombinant tissue plasminogen activator (rtPA), with the main exclusion criterion being hospital arrival after 4½ h.¹ The second most common exclusion criterion from rtPA treatment, which is present in approximately 1/3 of all patients, is a mild or rapidly improving syndrome, termed ‘too good to treat’.² Uncertainty remains as to whether these patients should be thrombolysed as they may improve without treatment thus avoiding potential haemorrhagic complications. Others have noted that approximately 25% of ‘too good to treat’ patients will go on to have a poor outcome.²³ The study by Smith *et al* examined the outcomes among untreated, as well as treated, patients with mild or rapidly improving strokes.

Methods

Patients from Get with the Guidelines Stroke Program (a registry of stroke patients admitted to participating hospitals in the USA) between 2003 and 2009 with a documented time to hospital arrival within 2 h of ischaemic stroke or transient ischaemic attack symptom onset were assessed. The main outcome was discharge disposition to home versus discharge to facility or death.

Findings

Thirty-one per cent of patients did not receive rtPA because of mild/improving stroke. Of these patients, 28.3% were unable to be discharged home and 28.5% were unable to ambulate without assistance at discharge. On the other hand, outcomes for the mild/improving stroke patients were better than for those with mild stroke (a National Institutes of Health Stroke Scale (NIHSS) score ≥ 5) who were treated (discharge home adjusted OR (AOR) 1.39, 95% CI 1.27 to 1.52; in hospital death AOR 0.46, 95% CI 0.35 to 0.62).

Commentary

As in prior studies, Smith *et al* found that about one-fourth of ‘too good to treat’ patients go on to have poor outcomes. These findings, in conjunction with reported safety in treating mild stroke and mimics, would suggest that these patients should be given rtPA. There is however a lack of rigorous clinical studies guiding treatment of these patients. Assignment

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Competing interests None.

to treatment with rtPA in these studies is not random and the treating physician may have a priori decided on treatment based on predictors of poor outcomes, such as arterial occlusion, a large initial deficit, the nature of the deficit or the presence of prior stroke.^{3–5} There is little consensus as to what constitutes ‘too good to treat’ in these studies, making it difficult to generalise the findings to the individual patient (eg, a significant proportion of patients deemed ‘too good to treat’ had NIHSS >5). This study has a notable strength of being one of the first to compare outcomes among those treated and untreated, shedding light on the possibility that mild stroke patients who are treated may not have a better outcome. The authors appropriately conclude that clinical trials are warranted. Until that time, treatment decisions will continue to be driven by the nature of the deficit and the unique characteristics of the patient.

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