

The safety and efficacy of intravenous tissue plasminogen activator (IV t-PA) in the elderly is unclear. Some studies have reported results of this treatment in patients 80 years of age or older (mean age 80-83 years). As our population ages, it is not uncommon for, otherwise healthy, patients 85 years or older to present with an acute stroke. The safety of t-PA in this population is unclear.

Overall Goals/Objectives:

Determine the safety and efficacy of IV t-PA in patients 85 years or older with acute ischemic stroke (AIS).

Target Population:

Patients with AIS who presented within 3 hours of onset and received IV t-PA at Overlook Hospital between January 2006 and May 2008.

Safety and Efficacy of Intravenous t-PA in Stroke in the Elderly (85 years or older) Acute Treatment for Stroke

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Specific Aim: Compare rates of symptomatic intracranial hemorrhage (sICH), modified Rankin scores at 3 months and mortality between patients less than 85 years and 85 years and older.

Methods: Clinical details regarding all patients with AIS admitted to Overlook Hospital are entered into a database. An attempt is made to follow all patients who receive IV t-PA for at least 3 months. We determined the rates of sICH, modified Rankin score at 3 months and mortality in all patients who received IV t-PA retrospectively from this database. A good outcome was defined as a Rankin score of ≤ 1 at 3 months. We compared these outcomes between patients 85 years and older and less than 85 years using Chi square analysis.

Results: Eighty one patients received IV t-PA during the duration of this study. Nineteen patients (23%; mean age 88 years) were 85 years or older and 62 patients were less than 85 years (77%; mean age 68 years). NIH stroke scale at presentation was similar (11.2 in ≥ 85 years group and 10.1 in the < 85 years group). The outcomes are shown in the table. One patient in each group was lost to follow up.

Discussion: In this preliminary study, we found no difference in the rate of sICH between patients 85 years and older and less than 85 years. A trend towards a better outcome was noted in younger patients. Mortality was similar in both groups. These results suggest that, as in individuals in their early eighties, IV t-PA is safe in those in their late eighties. In patients who are healthy, older age should not be a disqualification for receiving IV t-PA.

Age	sICH (p=NS)	Good Outcome (p= 0.059)	Mortality (p=NS)
≥ 85 years	1/19 (5.3%)	5/18 (27.8%)	4/18 (22.2%)
< 85 years	3/62 (4.8%)	32/61 (52.5%)	10/61 (16.4%)

Outcomes in patients receiving IV t-PA by age group. NS= Not significant

