

IMPACT OF AGE OR TIME TO TREATMENT ON CHANGES IN CLINICAL OUTCOME SCORES IN PATIENTS TREATED WITH TPA FOR ACUTE ISCHEMIC STROKE: THE LOYOLA UNIVERSITY MEDICAL CENTER (LUMC) EXPERIENCE

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Introduction: TPA for acute ischemic stroke (AIS) has been available in the USA since 1996, but its efficacy and safety related to age and time from symptom onset to treatment (TSx-TT) is still debated.

Objectives: Analyze clinical outcomes related to age and TSx-TT with tPA in the LUMC AIS database.

Methods: We reviewed our AIS database for patients treated with intravenous and/or intraarterial tPA between May 2006 and July 2010. Demographic variables were collected. Patient outcomes were assessed on admission and discharge using NIHSS and modified Rankin scale (mRS). We also calculated changes (Δ) in NIHSS or mRS from admission to discharge.

Results: Seventy-two AIS patients received tPA. Mean age was 67.7 ± 14 years. Mean TSx-TT was 152.6 ± 66.5 minutes. Six had intracerebral hemorrhage; only 1 was symptomatic. Mean Δ NIHSS was 5.2 (SD 6.5; range -10 to +26) and mean Δ mRS was 0.9 (SD 1.4; range -2 to +3). There was positive correlation between age and admission NIHSS ($p=0.004$) or mRS ($p=0.002$) or age and discharge NIHSS ($p=0.005$) or mRS ($p=0.04$). We found no correlation between Δ (improvement/decline) in scale scores associated with age (Δ NIHSS $p=0.265$; Δ mRS $p=0.82$) and found no correlation with age and Δ NIHSS ($p=0.45$).

Conclusions: While older age was associated with less favorable outcomes post tPA, this was because older patients presented with more severe strokes pre-tPA. Thrombolysis was not associated with worsening of outcome in older versus younger patients. Furthermore, outcomes related to TSx-TT were also not influenced by age.