Experience Of Thrombolysis In Patients With Mild Stroke (NIHSS 0-4): Sentinel Stroke National Audit Programme (SSNAP) Registry Data In England And Wales

Lizz Paley1, Benjamin Bray2, Martin James3, Pippa Tyrrell4, Geoffrey Cloud5, Alex Hoffman1, Anthony Rudd6 On behalf of the Intercollegiate Stroke Working Party and the SSNAP Collaboration


Contact: ssnap@rcplondon.ac.uk  Further details at: www.strokeaudit.org

INTRODUCTION
Mild stroke patients are often considered ‘too good to thrombolise’. National stroke register data was analysed to describe the safety and outcomes of thrombolysis in patients with mild stroke (NIHSS 0-4).

METHODS
Data were extracted from the national stroke register (SSNAP) of adults with acute stroke treated in all hospitals in England and Wales from April 2013-March 2015. SSNAP is estimated to collect data on over 95% of patients. Patients with ischaemic stroke were included in the analysis (N=127975 admitted to 197 hospitals).

RESULTS
• 44.3% (56663) of ischaemic stroke patients arrived at hospital within 4h of onset.
• Of these, 80.0% (45310) had a fully completed arrival NIHSS recorded
• 18248 (40.3%) had mild stroke with an NIHSS of 0-4.
• Also, of the 14895 patients thrombolysed with a fully complete NIHSS, 12% (1825) had a mild stroke

CONCLUSIONS
Mild strokes arriving within 4h of onset are less likely to receive iv-tPA than moderate/severe strokes, but are less likely to have thrombolysis complications. Outcomes are better for mild strokes receiving thrombolysis than those not receiving it.

Thrombolysis outcomes in those with mild stroke vs with an NIHSS of 5-42

Thrombolysis outcomes in mild strokes:
• 10.0% of mild strokes treated with iv-tPA
• Fewer clinician-reported complications (5.4%)
  • Fewer symptomatic intracranial haemorrhage (1.9%)
• Median improvement of 2 points on the NIHSS scale
• no significant difference in rates of deteriorating NIHSS over the first 24h

Thrombolysis outcomes in NIHSS 5-42 strokes:
• 48.3% of NIHSS 5-42 strokes treated with iv-tPA
• More clinician-reported complications (9.3%, p<0.001)
  • Fewer symptomatic intracranial haemorrhage (4.2%, p<0.001)
• Median improvement of 4 points on the NIHSS scale
• no significant difference in rates of deteriorating NIHSS over the first 24h (p=0.481)

Mild stroke outcomes in those thrombolysed vs those not thrombolysed

Mild stroke patients receiving thrombolysis:
• Inpatient mortality of 2.2%
• 83.4% of survivors independent upon discharge
  • 0.8% newly institutionalised

Mild stroke patient arriving within 4h of onset not receiving thrombolysis:
• Inpatient mortality of 3.0% (p=0.067)
• 75.1% of survivors independent upon discharge (p<0.001)
  • 3.0% newly institutionalised (p<0.001)