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April 10, 2018; 90 (15 Supplement) APRIL 24, 2018

Late Functional Recovery After Lacunar Stroke: Implications For Rehabilitation Studies (P3.229)

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First published April 9, 2018,

Abstract

Objective: To compare rates of functional recovery beyond 3-months in patients with lacunar versus non-lacunar strokes in a prospective, population-based cohort study.

Background: Non-acute interventions to enhance late stroke recovery are often tested initially in uncontrolled studies in patients with lacunar stroke owing to their low mortality and relatively isolated motor deficits. It is often assumed that neurological recovery is near complete by 3-months after the stroke, but there have been few studies of the capacity for late recovery beyond 3-months.

Design/Methods: In 3-month ischaemic stroke survivors of the Oxford Vascular Study (OXVASC; 2002–2014), we examined changes in functional status (modified Rankin Scale [mRS], Rivermead Mobility Index [RMI], Barthel Index [BI]) in lacunar versus non-lacunar strokes from 3–60 months post-stroke, stratifying by age. We used logistic regression adjusted for age, sex, and baseline disability to compare recovery (≥ 1 mRS grades, ≥ 1 RMI points and/or ≥ 2 BI points), particularly from 3–12 months.

Results: Among 1,425 3-month survivors, the 234 lacunar stroke patients did not differ from others for outcome at 3-months (aOR for 3-month mRS >2 : 1.14, 95%CI 0.75–1.74, $p=0.55$), but were much more likely to demonstrate further recovery between 3-months and 1-year (aOR: 1.64, 1.17–2.31, $p=0.004$). Results were similar on restricting the analysis to patients with 3-month mRS 2–4 (the range commonly recruited into recovery studies) and on excluding recurrent events (aOR[mRS] adjusted for age, sex, 3-month mRS: 2.28, 1.34–3.86, $p=0.002$). Similar results were seen with the BI and RMI (aOR[RMI] adjusted for age, sex, 3-month RMI: 1.78, 1.20–2.64, $p=0.004$).

Conclusions: Lacunar strokes have greater potential for late functional recovery from 3–12 months post-stroke, supporting the focus of studies of restorative therapies on this group. However, such studies cannot assume that improvements after 3-months are treatment-related, and should therefore be randomized and controlled.