

LETTERS

Residual poststroke disability is another opportunity to reduce long-term morbidity and mortality

I enjoyed reading the recent longitudinal case-control study by Dr. Edwards and colleagues on the long-term morbidity and mortality after stroke or transient ischemic attack,¹ and the accompanying commentary in which Dr. Hill emphasized the importance of optimizing recurrent stroke prevention.² I suggest that we also need to develop better strategies to address the residual disability experienced by patients with stroke after acute care, which puts them at a high risk of subsequent death and placement in long-term care.

Even after receiving the best-possible care for acute stroke, many patients are left with disability. The Oxford Vascular Study recently examined the time course of disability and cause-specific mortality over five years of follow-up in stroke survivors at three months.³ Most of the 1425 survivors had a “minor” stroke (median National Institutes of Health Stroke Scale 2, interquartile range 1–4), but 38% were still dependent at three months (modified Rankin Scale [mRS] score > 2). Three-month mRS > 2 was a strong independent predictor of death and/or persistent disability at one year and five years (e.g.

age/sex-adjusted hazard ratio of five-year death = 2.93, 95% confidence interval 2.38–3.60), with each step up the mRS disability scale associated with higher odds of these adverse outcomes. More than one-quarter of deaths beyond three months were from causes related to residual poststroke disability (e.g., pulmonary embolism after deep vein thromboses in patients with new poststroke immobility or aspiration pneumonia after new poststroke dysphagia).

Owing to the observational nature of the Oxford Vascular Study,³ one cannot be certain whether these deaths could have been prevented by mitigating the residual poststroke disability, such as through rehabilitation services (physiotherapy, occupational therapy, speech/language therapy). But interestingly, 25% of patients showed some meaningful improvement in their disability (improvement in mRS by ≥ 1 point) between three months and one year, which implies a longer window of opportunity to optimize recovery; better one-year functional status was also associated with lower five-year mortality. We know that a variety of rehabilitation interventions improve functional outcomes, even when applied late after stroke.⁴

Unfortunately, we also know that many Canadians, particularly those with financial barriers, struggle to access poststroke rehabilitation services after their time in hospital.⁵ Through concerted efforts to

optimize poststroke rehabilitation and thereby to mitigate the burden of residual poststroke disability, we may be able to improve further the long-term outcomes of death and placement in long-term care for stroke in Canada.

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