Community physiotherapy provides a small transient benefit for stroke patients with long term mobility problems

Synopsis


**Question:** Does routine community physiotherapy improve mobility in patients with mobility problems one year after stroke?  
**Design:** Randomised controlled trial.  
**Setting:** Established community physiotherapy services in the United Kingdom.  
**Patients:** Three hundred and fifty-nine patients were identified from stroke registers, 182 were eligible for inclusion, 170 consented and were randomised. Criteria for inclusion included: older than 50 years; stroke at least one year previously and with persisting mobility problems (use of a mobility aid other than a walking stick; fall in previous three months; unable to manage stairs, slopes or uneven surfaces independently). Exclusion criteria included dementia and severe comorbidity. One hundred and sixty-one patients completed the 3-month follow-up, 151 the 6-month follow-up and 146 the 9-month follow-up.  
**Interventions:** Eighty-five patients were allocated to the physiotherapy group and 85 to the control group. In the physiotherapy group, patients received treatment by an established community physiotherapy service. Treatment used a problem solving approach at home or in outpatient rehabilitation centres for a maximum of 13 weeks (minimum three contacts). The controls received no treatment.  
**Outcomes:** Primary outcomes were Rivermead mobility index and gait speed over 10m. Secondary outcomes included Barthel index, Frenchay activities index and proportion of subjects who had fallen. Outcomes were assessed at 3, 6 and 9 months by a blinded assessor and analysed according to the intention-to-treat principle.  
**Result:** The Rivermead index showed an effect of treatment at three months (but not at six or nine months), however the effect was small: the median difference in improvement was 1 point (95% CI 0 to 1) on the 0-15 point scale. There was a treatment effect on gait speed at three months (but not six or nine months) of 2.6m/min (95% CI 0.3 to 4.95). There were no statistically significant or clinically meaningful between-group differences in the Barthel or Frenchay indices or falls data at any time point.  
**Conclusion:** In patients with long term mobility problems following stroke, a community physiotherapy service provides small improvements in mobility. However, these improvement are only temporary.

Commentary

The trial’s major finding is that the intervention produced small, immediate improvements in mobility one year after stroke, which were not sustained. The first point to note is that the study investigated a routine community physiotherapy service in the UK. Unfortunately, there is very little information about the intervention and it appears that the therapists could do what they liked. While this may reflect the way this service operated, it means that, even if the intervention had been found to be highly effective, it would be almost impossible to implement in clinical practice. It is important that if the results of randomised controlled trials are to drive clinical practice, the intervention is described to a degree where it is understood by the audience.

Another striking feature regarding the intervention is the small amount of it. Although the duration of the intervention was three months, the median amount of treatments per patient was 3 (IQR 2-7) with the mean duration of each treatment session being 44 min (SD 21). There have been two systematic reviews (Kwakkel et al 1999, Langhorne et al 1996) which show that patients who received more physiotherapy after stroke had lower mortality and higher function than those who received the standard amount. Perhaps it is unreasonable to expect small amounts of therapy such as delivered in the Green et al (2002) trial to have a long-term effect. There are trials showing that short intensive bursts of intervention (eg Dean et al 1997, Taub et al 1993) are effective late after stroke. An alternative solution may be to provide less frequent but ongoing maintenance programs. Either way, the challenge is to identify effective therapy for this group of chronically disabled people.

Louise Ada  
The University of Sydney

References