What problems did the researchers set out to study, and why?
The authors asked the question of whether a modified form (.5 hr/d × 3 d/wk × 10 wk) of constraint-induced therapy (mCIT) leads to better outcomes than either dose-matched traditional therapy or no therapy at all for people with chronic stroke. This is an important question because it is not feasible for many clinics, at this time, to provide or be reimbursed for the more intensive CIT (6 hr/d × 14 d) that has been shown to be effective in some people during some time periods after stroke.

Who participated in the study?
35 people with chronic hemiparesis after stroke. Subjects had to have some ability to actively extend the affected wrist and fingers and had to report limited use of the affected upper extremity.

What new information does this study offer?
People treated with mCIT had better outcomes than those treated with traditional therapy and people who were given no therapy. Improved outcomes were found at the participation level (Motor Activity Log) and at the activity level (Action Research Arm Test)—which are the 2 levels that are most likely to be of importance to people with hemiparesis post stroke.

How did the researchers go about this study?
This was a Phase II single-blinded randomized controlled trial. Subjects were randomly assigned to 1 of 3 groups for 10 weeks: mCIT (n=13), traditional therapy (n=12), and no therapy (n=10). The primary trial end point was the change in Motor Activity Log at the end of the 10-week intervention. Secondary end points were the Action Research Arm Test and the Fugl-Meyer Assessment of Motor Recovery After Stroke.

How might the results of this study apply to the practice of physical therapy?
These results provide early evidence that mCIT is worth trying for patients who are similar to the ones studied here (for specifics, see the inclusion/exclusion criteria in the Method section). The amount of change in the mCIT group is large enough that it likely reflects a clinically meaningful change. In previous publications by these authors, the mCIT treatment has been sufficiently described such that therapists can replicate this intervention in their own clinics.

What are the limitations of the study, and what further research is needed?
As discussed by the authors, the main limitation is that no follow-up data are provided. A future Phase III trial is warranted to test the efficacy of mCIT and to evaluate whether its beneficial effects persist over time. It would be useful to design the Phase III trial to include periodic evaluations with the outcome measures. This would allow the research team to determine the appropriate duration of the mCIT intervention.

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