Summary

Background

Treatment guidelines for aphasia recommend intensive speech and language therapy for chronic (≥6 months) aphasia after stroke, but large-scale, class 1 randomised controlled trials on treatment effectiveness are scarce. We aimed to examine whether 3 weeks of intensive speech and language therapy under routine clinical conditions improved verbal communication in daily-life situations in people with chronic aphasia after stroke.

Methods

In this multicentre, parallel group, superiority, open-label, blinded-endpoint, randomised controlled trial, patients aged 70 years or younger with aphasia after stroke lasting for 6 months or more were recruited from 19 inpatient or outpatient rehabilitation centres in Germany. An external biostatistician used a computer-generated permuted block randomisation method, stratified by treatment centre, to randomly assign participants to either 3 weeks or more of intensive speech and language therapy (≥10 h per week) or 3 weeks deferral of intensive speech and language therapy. The primary endpoint was between-group difference in the change in verbal communication effectiveness in everyday life scenarios (Amsterdam–Nijmegen Everyday Language Test A-scale) from baseline to immediately after 3 weeks of treatment or treatment deferral. All analyses were done using the modified intention-to-treat population (those who received 1 day or more of intensive treatment or treatment deferral). This study is registered with ClinicalTrials.gov, number NCT01540383.

Findings

We randomly assigned 158 patients between April 1, 2012, and May 31, 2014. The modified intention-to-treat population comprised 156 patients (78 per group). Verbal communication was significantly improved from baseline to after intensive speech and language treatment (mean difference 2·61 points [SD 4·94]; 95% CI 1·49 to 3·72), but not from baseline to after treatment deferral (−0·03 points [4·04]; −0·94 to 0·88; between-group difference Cohen's d 0·58; p=0.0004). Eight patients had adverse events during therapy or treatment deferral (one car accident [in the control group], two common cold [one patient per group], three gastrointestinal or cardiac symptoms [all intervention group], two recurrent stroke [one in intervention group before initiation of treatment, and one before group assignment had occurred]); all were unrelated to study participation.

Interpretation

3 weeks of intensive speech and language therapy significantly enhanced verbal communication in people aged 70 years or younger with chronic aphasia after stroke, providing an effective evidence-based treatment approach in this population. Future studies should examine the minimum treatment intensity required for
meaningful treatment effects, and determine whether treatment effects cumulate over repeated intervention periods.

**Funding**

German Federal Ministry of Education and Research and the German Society for Aphasia Research and Treatment.