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[Intervention Review]

Speech and language therapy for aphasia following stroke

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ABSTRACT

Background

Aphasia is an acquired language impairment following brain damage that affects some or all language modalities: expression and understanding of speech, reading, and writing. Approximately one third of people who have a stroke experience aphasia.

Objectives

To assess the effects of speech and language therapy (SLT) for aphasia following stroke.

Search methods

We searched the Cochrane Stroke Group Trials Register (last searched 9 September 2015), CENTRAL (2015, Issue 5) and other Cochrane Library Databases (CDSR, DARE, HTA, to 22 September 2015), MEDLINE (1946 to September 2015), EMBASE (1980 to September 2015), CINAHL (1982 to September 2015), AMED (1985 to September 2015), LLBA (1973 to September 2015), and SpeechBITE (2008 to September 2015). We also searched major trials registers for ongoing trials including ClinicalTrials.gov (to 21 September 2015), the Stroke Trials Registry (to 21 September 2015), Current Controlled Trials (to 22 September 2015), and WHO ICTRP (to 22 September 2015). In an effort to identify further published, unpublished, and ongoing trials we also handsearched the *International Journal of Language and Communication Disorders* (1969 to 2005) and reference lists of relevant articles, and we contacted academic institutions and other researchers. There were no language restrictions.

Selection criteria

Randomised controlled trials (RCTs) comparing SLT (a formal intervention that aims to improve language and communication abilities, activity and participation) versus no SLT; social support or stimulation (an intervention that provides social support and communication stimulation but does not include targeted therapeutic interventions); or another SLT intervention (differing in duration, intensity, frequency, intervention methodology or theoretical approach).

Data collection and analysis

We independently extracted the data and assessed the quality of included trials. We sought missing data from investigators.

Main results

We included 57 RCTs (74 randomised comparisons) involving 3002 participants in this review (some appearing in more than one comparison). Twenty-seven randomised comparisons (1620 participants) assessed SLT versus no SLT; SLT resulted in clinically and statistically significant benefits to patients' functional communication (standardised mean difference (SMD) 0.28, 95% confidence interval (CI) 0.06 to 0.49, P = 0.01), reading, writing, and expressive language, but (based on smaller numbers) benefits were not evident at follow-up. Nine randomised comparisons (447 participants) assessed SLT with social support and stimulation; meta-analyses found no evidence of a difference in functional communication, but more participants withdrew from social support interventions than SLT. Thirty-eight randomised comparisons (1242 participants) assessed two approaches to SLT. Functional communication was significantly better in people with aphasia that received therapy at a high intensity, high dose, or over a long duration compared to those that received therapy at a lower intensity, lower dose, or over a shorter period of time. The benefits of a high intensity or a high dose of SLT were confounded by a significantly higher dropout rate in these intervention groups. Generally, trials randomised small numbers of participants across a range of characteristics (age, time since stroke, and severity profiles), interventions, and outcomes.

Authors' conclusions

Our review provides evidence of the effectiveness of SLT for people with aphasia following stroke in terms of improved functional communication, reading, writing, and expressive language compared with no therapy. There is some indication that therapy at high intensity, high dose or over a longer period may be beneficial. HIgh-intensity and high dose interventions may not be acceptable to all.

PLAIN LANGUAGE SUMMARY

Speech and language therapy for language problems after a stroke

Review question

We reviewed the evidence of the effect of speech and language therapy (SLT) on language problems experienced by people after a stroke (known as aphasia).

Background

About a third of people who suffer a stroke develop aphasia. One or more areas of communication can be affected: speaking, oral comprehension, reading, and writing. Speech and language therapists assess, diagnose, and treat aphasia at all stages of recovery after stroke. They work closely with the person with aphasia, families, and other healthcare professionals. We wanted to see whether SLT for aphasia was effective and whether it was better or worse than non-specialist social support. We also wanted to see which approaches to therapy offered the best recovery.

Study characteristics

The evidence is current to September 2015. We found and included 57 studies involving 3002 people with aphasia in our review. We reviewed all SLT types, regimens, and methods of delivery.

Key results

Based on 27 studies (and 1620 people with aphasia), speech and language therapy benefits functional use of language, language comprehension (for example listening or reading), and language production (speaking or writing), when compared with no access to therapy, but it was unclear how long these benefits may last.

There was little information available to compare SLT with social support. Information from nine trials (447 people with aphasia) suggests there may be little difference in measures of language ability. However, more people stopped taking part in social support compared with those that attended SLT.

Thirty-eight studies compared two different types of SLT (involving 1242 people with aphasia). Studies compared SLT that differed in therapy regimen (intensity, dosage and duration), delivery models (group, one-to-one, volunteer, computer-facilitated), and approach. We need more information on these comparisons. Many hours of therapy over a short period of time (high intensity) appeared to help participants' language use in daily life and reduced the severity of their aphasia problems. However, more people stopped attending these highly intensive treatments (up to 15 hours a week) than those that had a less intensive therapy schedule.

Quality of the evidence

Generally, the quality of the studies conducted and reported could be improved. Key quality features were only reported by half of the latest trials. Thus, it is unclear whether this was the result of poorly conducted studies or poorly reported studies. Most comparisons we made would benefit from the availability of more studies involving more people with aphasia.