Rotterdam Aphasia Therapy Study - 3

RATS-3

An RCT on the efficacy of intensive cognitive-linguistic treatment in the acute stage of aphasia

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- Background
  - Aphasia is a severely disabling acquired language deficit
  - Most patients receive speech and language treatment (SLT)
  - SLT comprises various treatment types and approaches
  - An impairment-based approach with cognitive-linguistic treatment (CLT), supposedly interacts with spontaneous neural recovery
  - Best practice recommendation: start early with intensive CLT, but evidence is frail and it puts a burden on patients and SLT-resources
- Aim of RATS-3: to test whether 4 weeks of early intensive CLT is more effective than no treatment in the first 4 to 6 weeks after stroke, and whether this therapeutic approach generates a long-lasting benefit

Methods

- Multicenter randomized controlled trial, PROBE design (n=152)
- Randomized within 2 weeks after stroke to:

Intervention group (n=80):

Intensive (1 hour/day) CLT for 4 weeks

Control group (n=72):

No language therapy for 4 weeks

- After the first 4 weeks regular therapy was allowed in both groups
- Primary outcome: Amsterdam-Nijmegen Everyday Language Test (ANELT) after 4 weeks, measuring everyday verbal communication
- Follow-up at 4 weeks, 3 months and 6 months after randomization
- Linear regression analyses, adjusted for age, sex, education, stroke type & location, baseline aphasia severity, baseline Barthel Index

Results and conclusion

- Feasibility of early intensive CLT: 29% of 80 patients in intervention group reached ≥28 hours in 4 weeks; median intensity: 24.5 hours
- Intention-to-treat analyses:
  - No stat. sig. differences between groups on primary outcome (ANELT), at all time points
  - No stat. sig. differences on all secondary outcomes (semantics, phonology and general functioning), at all time points
  - 95% CIs exclude clinically relevant effect on all tests, at all time points
- On-treatment analyses: comparable results
- Conclusion:
  - Intensive CLT is not feasible in most patients in the acute phase after stroke and does not add to spontaneous recovery
  - No urgency to start CLT as soon as possible after stroke