

“Time is on my side”: From chronic global aphasia to mild residual language processing difficulties—A case study of ‘recovery’ of language functions

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Introduction

In considering the ‘recovery’ of language functions in aphasic clients, time as a variable is ubiquitous. With regard to the assessment and treatment of an aphasic’s processing abilities, one crucial aspect of an aphasic’s performance is that it does not remain static during the months or years post-onset. Thus, recovery is in essence “...a time-dependent process in that it requires the passage of time in order to become manifest.” Time is, however, not a causal variable, but rather “...time is significant solely because it gives other processes an opportunity to act, and it is these other processes that are the causal agents” (Miller, 1984, p. 7).

In this paper, we analyze longitudinal language data from a participant (NE), who was diagnosed as globally aphasic at 13 months post-onset. Over a period of 6 years, NE received intensive language therapy and attained an almost complete recovery of language functions. In the following 4 years, she continued to improve. The last aphasia test—at 11 years post-onset—yielded the result: ‘no aphasia’. The main focus of this paper is a documentation of the evolution of NE’s process of recovery with regard to the language therapy provided and, in particular, the role of drawing to facilitate naming and ‘set’ language production in motion and to improve her naming abilities.

Methods

Participant, NE

At the age of 32, NE, a right-handed, female, who was a graphic artist by profession, fell unconscious on a skiing trip. An AV-malformation was verified by angiography and an osteoplastic craniotomy was performed left fronto-temporal with emptying of the haematoma. Initially she was globally aphasic with a right hemiplegia. At 13 months post-onset standardized aphasia testing [Aachen Aphasia test (AAT); Huber, Poeck,

Weniger, & Willmes, 1983] still revealed a global aphasia. The most severe deficits were severe speech initiating difficulties, lexical retrieval deficits and echolalia.

Procedure

Beginning 13 months post-onset NE participated in four therapy protocols which aimed at improving her lexical retrieval in the context of oral and written sentence, dialogue and discourse production. Therapy was provided 3–4 times a week for 1 h. The relevant test times for this paper are: Test 1 (pre-therapy protocol I), Test 2 (post-therapy protocol I), Test 5 (post-therapy protocol IV), Test 6 and Test 7 (2 and 4 years following protocol IV, respectively). All test and therapy sessions were audio- and videotaped for analysis.

A crucial aspect of the therapy is assumed to be the inclusion of drawing as a means for NE to better recall and activate the language units worked on. Drawing was incorporated into the first therapy protocol midway at session 40. Due to the almost immediate change in performance, it was maintained for all of the therapy programs. NE was asked to draw the contents of the each therapy session as a homework assignment. After completion of four therapy protocols, NE met with the therapist for informal sessions approximately every 2 weeks.

Results

The evolution of her language processing deficits based on results from the AAT is:

Global > Broca’s > anomic > residual language processing difficulties > no aphasia.

The most marked improvement is observed following the first therapy protocol (Test 2) for the subtest naming. For Test 1 she attained a raw score of 12 and for Test 2 a raw score of 73. In Fig. 1, a superimposition of four of the test times is provided: Test 1, Test 5, Test 6 and Test 7. For Test 7 the results indicate that NE has ‘no aphasia’.

Repeated administrations of the Boston Naming Test, Action Naming and Amsterdam Nijmegen Everyday Language test (ANELT) also revealed a marked improvement in performance.

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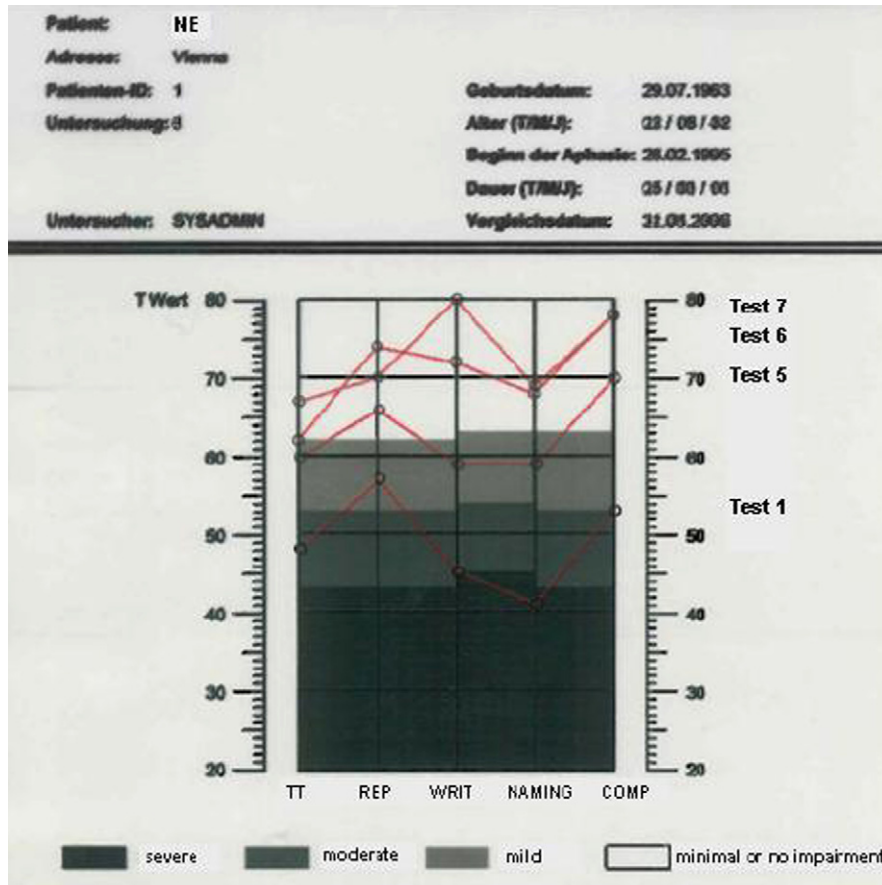


Fig. 1. A superimposition of the AAT results for Test 1, Test 5, Test 6 and Test 7.

Discussion

This is an interesting case study for at least three reasons:

- (1) The degree of improvement attained by NE—a chronic aphasic with a severe language impairment, i.e. global aphasia—long after the period of spontaneous recovery could be considered to be over.
- (2) The improvement or recovery of language functions did not end with the completion of the last intensive therapy protocol. It continued for several years. To date, NE's spontaneous speech is continuing to become more fluent.
- (3) The role drawing from memory is considered to have played in the therapy process.

These issues will be discussed with reference to language test and therapy data from the various stages of recovery evolving from global to 'no aphasia'. NE's verbal communication shows a steady improvement as reflected by her test scores. Based on an analysis of the test and therapy data we hypothesize that the task of drawing from memory played a significant role in NE's improvement. In a recent publication, Farias, Davis, and Harrington (2006) discuss the important contribution of drawing in facilitating naming ability in aphasic clients. Our data substantiate their findings. Since drawing from memory necessarily

involves the analysis, retrieval and (re)production of visual information (pictures of single activities), this activity strengthens the connections between visual representations and the semantic system. In NE's case, the combination of word-finding and speech initiation difficulties benefited from her having single or multiple inner pictures of the nouns, verbs, sentences, discourses worked on in therapy. NE's lexical retrieval was thus facilitated by recalling the pictures, activating the permanent records she had drawn as a homework assignment. Although Sarno (1998) rightfully stresses that complete recovery (return to a normal state) of premorbid language functions is observed in: "few patients who have aphasic symptoms at 3–4 months post-onset" (p. 601), NE is very close to this goal.

References

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