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Discourse production after TBI: is there a severity effect?

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Abstract

Traumatic brain injuries (TBIs) are often associated with communicative deficits even in patients who are not aphasic. Accumulating evidence suggests that methods of discourse analysis provide an effective way to identify such deficits in non-aphasic individuals with TBI with different severity levels (e.g., Galetto et al., 2012; Cannizzarro & Coelho, 2012). However, little research has directly compared narrative abilities across the severity spectrum of TBI. In this study 60 Italian-speaking participants formed a group with severe TBI (N=20), one with moderate TBI (N=20), and one control group (N=20). The three groups were matched for age, level of formal education, and gender and all TBI participants were non-aphasic and in the chronic stage. The subjects completed tasks designed to assess attention, verbal learning, executive functions, and linguistic skills. Their narrative skills were assessed by administering the Multilevel Procedure for Discourse Analysis (Marini et al., 2011). All participants performed in the normal range on the Aachener Aphasie Test. On all tasks tapping cognitive skills, individuals with severe TBI performed worse than those with moderate TBI who, in turn, performed worse than controls only on the production of perseverative and non perseverative errors at the Wisconsin Card Sorting Test. Both groups of participants with TBI had reduced speech rate but only individuals with severe TBI had additional difficulties (reduced mean length of utterance, production of more semantic and morphological errors and fewer grammatically well-formed sentences than controls). Even more interestingly, the analysis of the macrolinguistic aspects of narrative production showed that both groups with TBI had difficulties in establishing links of local and global coherence. A series of Pearson product moment

correlation analyses revealed that the macrolinguistic difficulties observed in the two groups of participants with TBI were correlated to attentive and executive difficulties. Overall, these results 1) confirm that procedures of discourse analysis allow clinicians to detect linguistic difficulties not captured by traditional linguistic tests, 2) highlight that severe TBI affects not only macro- but also microlinguistic skills, and 3) suggest that the macrolinguistic impairments observed in patients with TBI may at least in part depend on executive and attention skills.

References

Cannizzaro, M., & Coelho, C. (2012). Communication following executive dysfunction. In R.K. Peach & L.P. Shapiro (Eds.), Cognition and acquired language disorders (pp. 227-240). St. Louis, MO: Elsevier Mosby.

Galetto, V., Andreetta, S., Zettin, M., Marini, A. (2013). Patterns of impairment of narrative language in mild traumatic brain injury. Journal of Neurolinguistics, 26, 649-661.

Marini, A., Andreetta, S., Del Tin, S., & Carlomagno, S. A. (2011). Multi-level approach to the analysis of narrative language in Aphasia. *Aphasiology, 25*, 1372-1392.