

A BRAIN-COMPUTER INTERFACE AS A TOOL FOR PSYCHOLOGICAL INTERVENTION IN DEPRESSED PATIENTS DIAGNOSED WITH AMYOTROPHIC LATERAL SCLEROSIS?

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A group of 76 patients diagnosed with amyotrophic lateral sclerosis were interviewed to assess depressive symptoms and quality of life. In contrast to many reports in the literature (e.g., Rabkin et al., 2000) a remarkable portion of the patients showed mild to moderate (58%) or clinically relevant (43%) depressive symptoms. Depression was assessed with the ALS-Depressions-Fragebogen (ALS-depression-questionnaire, Kübler et al., submitted), a questionnaire developed to assess depression in ALS patients taking into account the specific situation of increasing physical impairment culminating in total motor paralysis. Correlation between the severity of depression and physical impairment was moderately positive indicating that variables other than the stage of the disease play a role in how patients cope with an intractable illness. No differences in depression and quality of life was found between patients on artificial ventilation and other ALS patients. A strong negative correlation between depression and quality of life was found. Losing the ability to communicate was a major worry in many patients. By providing patients with a brain-computer interface, quality of life may be maintained or improved when communication is already restricted or impossible. Although a correlation between decreased quality of life and depression does not imply a causal relationship it may well be speculated that by improving quality of life, depressive symptoms may be reduced. Thus, a brain-computer interface may become a tool in psychological treatment of depression in ALS patients.

- Rabkin, J. G., Wagner, G. J., & Bene, M. D. (2000). Resilience and distress among amyotrophic lateral sclerosis patients and caregivers. *Psychosomatic Medicine*, 62, 271-279.
- Kübler, A, Kaiser, J & Winter, S (submitted). ADF-12: Ein 12 Item Fragebogen zur Messung von Depressivität bei Patienten mit amyotropher Lateralsklerose (A 12 items questionnaire to assess depression in patients diagnosed with amyotrophic lateral sclerosis). *Diagnostica*.