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ON THE RELEVANCE OF COMORBIDITY IN PSYCHIATRY: EEG LORETA IN GENERALIZED ANXIETY DISORDER WITH AND WITHOUT NONORGANIC INSOMNIA

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Introduction: Comorbidity is increasingly regarded as important for both diagnosis and treatment of psychiatric disorders.

Objectives: Electrophysiological neuroimaging such as low-resolution brain electromagnetic tomography (LORETA) may be utilized to obtain insight into the pathogenesis of mental diseases.

Aims: The aim of the present study was to compare EEG tomographic data obtained in generalized anxiety disorder (GAD) with and without nonorganic insomnia.

Methods: In the first study, LORETA was performed in 44 untreated patients (25 females) with the primary diagnosis of nonorganic insomnia (F51.0) associated with GAD (F41.1) and 44 age- and sex-matched normal controls. In the second study, 18 patients (9 females) with the primary diagnosis of GAD without mandatory insomnia were compared with 18 controls.

Results: While patients with F51.0 and concomitant F41.1 showed an increase in LORETA power in the delta, theta, alpha-1 and alpha-2 frequencies, GAD patients without mandatory insomnia demonstrated a decrease in LORETA power - specifically in delta (more left than right hemisphere, involving occipital cortex, insula, cingulate and frontal cortex) and beta (occipital cortex), mirroring neuroimaging findings on the neural circuitry of anxiety.

Conclusions: Different EEG LORETA findings were obtained in GAD patients, depending on the comorbidity: While in daytime recordings patients with nonorganic insomnia demonstrated increased slow activities reflecting daytime tiredness and sleepiness, GAD patients without insomnia exhibited a decrease in slow activity and thus hypervigilance. According to the key-lock principle different pharmacological strategies have to be applied, which will be demonstrated on the basis our own data sets.

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