AS21-02 - BULIMIA NERVOSA AND IMPULSIVENESS: ELECTROPHYSIOLOGICAL EVIDENCE OF HYPERAROUSAL-RELATED IMPAIRMENT OF INHIBITORY PROCESSES

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Objectives: Bulimia nervosa (BN) is associated with a deficit of self-regulatory control and impulsivity. The present study was aimed to clarify, using electrophysiological techniques, whether impulsivity in BN subjects is related to hyperarousal, which impairs inhibitory control. A poor modulation of emotional arousal might induce impulsive behaviors through this mechanism favoring binge eating as well as comorbidity with substance abuse.
Methods: Event-related potentials were recorded in 17 female patients with BN and 17 healthy controls, during a three-tone oddball task. ERP components related to response inhibition, effortful and automatic processing were analyzed. ERP topography and tomography were analyzed by means of the microstate and LORETA techniques.
Results: BN patients showed reduced amplitude and shorter latency of the N200; increased amplitude and shorter latency of the target SW; higher activity of the distracter P300 generators in left fronto-parietal-temporal cortex and bilateral cingulate; lower activity of the target SW generators in right frontal gyrus, left parieto-temporal regions, and bilateral cingulate.
Discussion: The observed electrophysiological abnormalities suggest a condition of hyperarousal, with impaired suppression of irrelevant stimuli due to abnormal cortical activation and reduced signal-to-noise ratio. Our findings point to functional abnormalities within a neural system that subserves self-regulatory control and reward, which may contribute to binge-eating and other impulsive behaviors in women with BN.

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