

P-566 - ELECTROPHYSIOLOGICAL INVESTIGATION OF IMPULSIVENESS IN PATIENTS WITH BULIMIA NERVOSA: EVIDENCE OF REDUCED INHIBITORY CONTROL

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Introduction: Bulimia nervosa (BN) has been previously associated with impulsivity and a deficit of self-regulatory control. However, the pathophysiological mechanisms underlying such behaviors have not been clarified.

Objectives/aims: The present study was aimed to investigate, using electrophysiological techniques, whether impulsivity in BN subjects is related to hyperarousal, which might impair inhibitory control.

Methods: Event-related potentials were recorded in 17 female patients with BN and 17 matched 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 brain electrical microstate and LORETA techniques.

Results: With respect to healthy controls, 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. The electrophysiological abnormalities correlated positively with the BIS scores for impulsiveness.

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.