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PERCEPTION OF BODY SHAPE IN BULIMIA NERVOSA: AN ERP STUDY

U. Volpe, S. Galderisi, A. Mucci, A. Vignapiano, V. Montefusco, D. Russo, M. Maj
Department of Psychiatry, University of Naples SUN, Naples, Italy

Body image distortion represents a key clinical feature of eating disorders (EDs), but its neurobiological underpinnings are poorly understood. Previous functional imaging studies yielded inconsistent findings, indicating a possible involvement of fronto-temporal and/or limbic abnormalities. Since these putative regions are highly interconnected and participate into functional networks, it might be useful to study the temporal evolution of their activation during the processing of body images.

The present study was aimed to explore the neurobiological correlates of body image processing in subjects with bulimia nervosa (BN), using the high-time resolution, electrical neuroimaging technique called LORETA.

Event-related potentials (ERPs) were recorded from 30 unipolar channels in 10 subjects with BN and 10 matched healthy controls, during the performance of an emotional counting Stroop task, in which the distorted, non-distorted and scrambled image of their own body and an unfamiliar body image were randomly presented on a computer screen.

Using the LORETA source imaging technique, we found that subjects with BN had a greater activation in frontal areas and anterior cingulate during late phases of body image processing, with respect to healthy controls.

Our results indicate that patients with BN need to allocate a greater amount of attentive and executive resources, than healthy controls, during the integrative stage of body shape processing.