SPECIFIC DEF ICITS IN EMOTIONAL PROCESSING IN PARKINSON’S PATIENTS ARE RELATED WITH EXECUTIVE DISFUNCTIONS


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Introduction: Parkinson’s disease (PD) is a movement disorder traditionally associated with motor symptoms. However, impairments in executive functioning may also accompany this disorder. A key aspect of executive functions (EF) is the capacity of performance two tasks at the same time (divided attention). Communication and everyday interactions occur in situations that require divided attention (between multiple tasks). Recent studies suggest that emotional facial expressions (EFEs) processing depend of cognitive ability and it is differentially affected in neurodegenerative diseases. PD patients should have a specific decline in EFEs processing, when the task consume resources of divided attention.

Aims: The goal of the study was to investigate whether EFEs processing in PD patients is more negatively affected than in healthy adults when the identification required a divided attention task. Our hypothesis is that PD patients shown specific deficits in relation to controls.

Methods: Two groups of participants (PD and healthy adults) had to identify 24 facial expressions of virtual actors enacting the six basic emotions (happiness, sadness, anger, fear, surprise and disgust) under two conditions: identification only and identification with a concurrent visuospatial task (a Corsi Blocks trial).

Results: Results showed that PD patients have specific deficits in EFEs processing when the identification occurs with a simultaneous task. When computing the dual-task costs, PD patients showed more significant costs than controls.

Conclusions: This suggests that emotional processing in PD patients is related to EF deficits. Also reveals how this processing is differentially affected in neurodegenerative diseases.