

P-973 - GRAY MATTER VOLUME ALTERATIONS ASSOCIATED WITH DISSOCIATIVE TRAITS IN PTSD AND TRAUMATIZED CONTROLS

M.Pagani^{1,2}, D.Nardo¹, G.Hogberg², R.Lanius³, T.Bravo⁴, H.Jacobsson², C.Jonsson², T.Hallstrom²

¹Institute of Cognitive Sciences and Technologies, CNR, Rome, Italy, ²Department of Nuclear Medicine, Karolinska University Hospital, Stockholm, Sweden, ³Neuroimaging Laboratory, Santa Lucia Foundation, Rome, Italy, ⁴Department of Clinical Neuroscience, Section for Psychiatry, Huddinge, Karolinska Institutet, Stockholm, Sweden, ⁵Department of Psychiatry, Schulich School of Medicine and Dentistry, The University of Western Ontario, London, ON, Canada, ⁶Department of Psychiatry, Barcelona University, Barcelona, Spain

Aims: Dissociation is a common feature of PTSD and neurobiological evidence distinguish it from nondissociative PTSD. The aim of this study is to investigate brain functional and structural alterations associated with dissociative traits along a continuum in a group of traumatized subjects either developing or non-developing PTSD.

Methods: Among 32 traumatized subjects with and without clinical diagnosis of PTSD we identified two subgroups based on the amount of dissociative traits as investigated by Dissociative Experience Scale (DES). Ten subjects had high dissociative traits (D) and 22 lower (ND). MRI and SPECT scans were performed to investigate structural and functional differences, respectively, between subgroups. Statistical Parametric Mapping was implemented for statistical analysis.

Results: D vs ND comparison showed significant Gray Matter volume (GMV) increases in the right prefrontal cortex, inferior parietal lobule and temporal pole (comprising adjacent parahippocampal gyrus) and in bilateral medial prefrontal cortex. ND vs D comparison showed a significant GMV reduction in D subjects in the right striatum. By regressing GMV against DES scores, we found a significant positive correlation, largely superimposing to the regions identified by the D vs ND contrast, in bilateral prefrontal and anterior cingulate cortex and temporal poles and in the right inferior parietal lobule. No significant differences were found at SPECT.

Conclusions: Significant structural differences were found between D and ND in prefrontal and anterior temporal cortex in which GM highly correlated with DES scores suggesting a strong neurobiological ground for dissociation and the involvement of such structures in its processing.