FC01-05 - SELF-RATING SCALES ASSESSING SUBJECTIVE WELL-BEING AND DISTRESS CORRELATE WITH CBF IN PTSD-SENSITIVE REGIONS

M. Pagani[1,2], D. Nardo[3], G. Högberg[4], H. Jacobsson[2], S.A. Larsson[2]

[1]*Institute of Science and Techologies of Cognition, CNR, Rome, Italy,* [2]*Nuclear Medicine, Karolinska University Hospital, Stockholm, Sweden,* [3]*Neuroimaging Laboratory, Santa Lucia Foundation, Rome, Italy,* [4]*Department of Clinical Neuroscience, Section for Psychiatry, Huddinge, Karolinska Institute, Stockholm, Sweden*

Objective: The aim of this study was to investigate the distribution of the regional cerebral blood flow (rCBF) in occupational related PTSD subjects and to seek for possible correlations between brain perfusion and self-rating scales (SRSs) in order to cross-check their diagnostic value and to look for their neural correlates.

Method: Sixteen traumatized underground and long-distance train drivers developing (S) and 17 not developing (NS) PTSD after having experienced a "person-under-train" accident underwent clinical assessment and ^{99m}Tc-HMPAO-SPECT during trauma scripts. Statistical parametric mapping (SPM2) was applied to analyse rCBF changes in S as compared to NS, and to search for correlations between rCBF and SRSs scores, modeling age, months since trauma and the ratio 'gray matter/intra-cranial volume' as nuisance variables.

Results: Significantly higher activity was observed during trauma script in left posterior insula, posterior cingulate, inferior parietal lobule, precuneus, and caudate in S as compared to NS. Impact of Event Scale (IES) and World Health Organisation (ten) Well-Being Index (WHO-10) scores highly correlated with tracer uptake to a great extent in the same regions in which rCBF differences between S and NS were found.

Conclusions: These findings support the involvement of posterior insular, cingulated, and parietal cortices (as well as the caudate) in the pathogenesis of PTSD and in the processing of related subjective well-being and distress. Our findings seem to provide a cross-validation for IES and WHO-10 scales by means of SPECT data, supporting their validity in the diagnosis of PTSD, and suggesting their use in future works.