SOA02-01

NEUROIMAGING FINDINGS AND DIAGNOSIS

S. Kasper

Medical University of Vienna, Vienna, Austria

There is a lack of a precise and biologically verifiable definition of illness, which in turn contributes to the inconsistencies published in the literature on the topic of neurobiological abnormalities within psychiatric diseases. Among the available neuroimaging tools, positron emission tomography (PET) and functional magnetic resonance tomography (fMRI) are the most promising tools. For affective disorders, volumetric and functional dysregulations have been shown in the prefrontal cortex, basal ganglia, amgydala and hippocampus and receptor imaging revealed differences to healthy controls for the serotonin transporter as well as the 5HT1A and 5HT2 receptor. For schizophrenia the volumetric and functional dysregulations have also be obtained in the prefrontal cortex, however, different to affective disorders, in ventricular volume, striatal volume, activity in temporal lobe and changes in receptor imaging with dopamine release as well as dopamine 1 and 2 receptors. Anxiety disorders have been related to volumetric and functional dysregulation in amgydala, prefrontal cortex and hippocampus and the receptor imaging was related to changes in serotonin 5HT1A receptor as well as dopamine 1 receptors. Given the high comorbidity between depression and the different anxiety disorders, it seems to be unlikely that these disorders result in a different biological characteristic. Future research will focus on subgroup analysis encompassing both neuroimaging techniques and molecular changes leading to specific subgroups, which hopefully lead to specific treatment modalities. Specific biomarkers are likely to be characteristic for illness subtypes associated with specific treatment outcomes.

https://doi.org/10.1016/S0924-9338(09)70361-X Published online by Cambridge University Press