SOA04-01 - UPDATE ON PATHOPHYSIOLOGY OF SCHIZOPHRENIA

P.Falkai

Department of Psychiatry, University of Göttingen, Göttingen, Germany

Since the beginning of the last century, schizophrenia has been regarded as a brain disorder. Neurotransmitter hypotheses postulated disturbances of the dopaminergic and glutamatergic system. Structural, functional and spectroscopic Magnetic Resonance Imaging as well as Diffusion Tensor Imaging studies revealed alterations in neuronal networks including the hippocampus as a key structure with resulting disturbances in macro- and microconnectivity. Post-mortem studies including histological stereology and microarray investigations reveal that on the cellular and molecular level, deficits in number and function of oligodendrocytes and myelin components as well as synaptic proteins and structural synaptic elements are prominent. Immune-related genes have been shown to be altered and may influence synaptic function and neurotransmission. These alterations may be related to neurodevelopmental disturbances and, in a subgroup of patients, to an additional non-typical neurodegenerative component. However, in post-mortem studies, antipsychotics may influence the glutamatergic system and synaptic components. New treatment options are needed to improve synaptic plasticity and connectivity related to the pathophysiology of schizophrenia.

https://doi.org/10.1016/S0924-9338(12)75664-X Published online by Cambridge University Press