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Neuro-inflammation and chronic psychiatric disorders

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Various studies have indicated that inflammation might have a significant role for the development of psychiatric disorders such as depression, anxiety, alcohol use disorder, schizophrenia, autistic spectrum disorders and neurodegenerative disorders like alzheimer's disease. The evidence that has accumulated over the years suggests that there exists a cross-talk between the neurotransmitters and the immune system. This cross-talk might have a role in the etiology of psychiatric disorders. Inflammation may affect different neurotransmitter systems. For example, inflammation may increase the expression and function of serotonin transporter and GABA receptors in the hippocampus or induces the enzyme indoleamine 2, 3-dioxygenase, which may eventually influence glutamatergic neurotransmission. Immune cells are also adept at synthesizing and releasing neurotransmitters like GABA. GABA exposure inhibits the inflammatory response *in vitro* and *in vivo*, in a mouse model of obesity. This cross-talk can influence the response to anti-depressant drugs. In fact, one mechanism in the therapeutic effects of antidepressants might be their anti-inflammatory effects. Inflammatory response markers like IL-6, TNF-alpha and CRP in plasma decrease over time in patients that respond to treatment. The suggested sources of inflammation in psychiatric diseases are psychological stress, early life stress, obesity, inflammatory diet (high-fat diet, imbalance of n-6/n-3 polyunsaturated fatty acids), oxidative stress due to ethanol metabolism, insufficient sleep and unbalanced gut microbiota. In this session cases of neuro-inflammation in chronic psychiatric disorders will be presented with a brief review of current literature on the subject.

Biography

Baris Onen Unsalver is currently an assistant professor of psychiatry at the Uskudar University, Istanbul, Turkey. She has been working at the NP Istanbul Brain Hospital for 9 years. She has been working in the area of neuropsychiatry, neuropsychopharmacology and published over 40 papers in peer-reviewed journals, as well as invited chapters in books. Her research and clinical interests focus on psychosomatics, neurophilosophy and brain-stimulation therapies in neuropsychiatric disorders.

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