

Neurotransmitters

Psychology



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Neurotransmitters Neurotransmitters The neurotransmitters are chemical substances that permit the flow of signals between the neurons across the synapses. Dopamine is a neurotransmitter that is inhibitory in nature. The neurotransmitter is related to the symptoms observed in the schizophrenia patients. Schizophrenia is a complex psychological disorder that results from the chemical imbalance in the brain cells leading to an over secretion of the neurotransmitter. Therefore, the relationship between schizophrenia and dopamine is the chemical imbalance; whose symptoms from the several studies show similarity (Ristner, 2010).

For instance, the D1 family of dopamine receptors facilitates activities such as episodic memory and emotions that are inactive in schizophrenics. The lower binding of D1 dopamine explains this phenomenon in schizophrenics.

The introduction of antipsychotic drugs increases the secretion of D1 dopamine thus; the schizophrenics gain the normal condition. The concentration of D2 dopamine receptors is higher than that of the D1 receptors. Hence, its concentration is extremely high in the schizophrenics' brains as compared to that in the normal persons' brains (Ristner, 2010).

The antipsychotic drugs aim at reducing the binding of D2 dopamine receptors. This practice enables the attainment of balance between the D1 and the D2 dopamine receptors. Notably, the changes in the chemical composition of the neural membrane contents affect the functions of dopamine receptors. Certain antipsychotic drugs bind with the dopamine receptors making the binding of dopamine and dopamine receptors ineffective. This impairs the biological binding process, making the treatment difficult. In stead, the level of dopamine increases in the patients. The monitoring of dopamine level in the brain is a prerequisite in the

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development of schizophrenia (Ristner, 2010).

<http://t1.gstatic.com/images?q=tbn:ANd9GcRQGfSdUBgyUwlhZJ2xasr-BfR-WceAqqRvojKVa4m6EDNO563kg>

Fig. 1. 0

http://www.ealth.am/images/uploads/schiz-fig4.4_thumb.jpg

Fig. 2. 0

<http://g.psychcentral.com/news/u/2011/07/neurons-4.jpg>

Fig. 3. 0

Reference

Ritsner, S. M. (2010). Brain Protection in Schizophrenia, Mood and Cognitive Disorders. New York: Springer