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TÍTULO

THE NEW FUNCTIONS OF CEREBELLUM

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RESUMO

Introduction: There is no denying that, traditionally, the cerebellum has been seen as an area of the brain involved mainly in the motor behavior. In recent decades, however, it was suggested the introduction of this structure as a brain region of a renewed interest for neuropsychiatric disorders. It is the aim of this article to discuss the new functions of the cerebellum on depression. **Literature review**: It is still uncertain the right cerebellar areas which are involved in the cognitive process although under the anatomical point of view, certain regions of the cerebellum - such as vermis, fastigial nucleus and the flocculus-nodular lobe - show reciprocal connections with reticular nucleus of brainstem and the limbic system and autonomous, including areas such as the hypothalamus, hippocampus and amygdala. And these connections are responsible for providing a consistent basis with the anatomy regarding the functionality of the cerebellum in cognition. The association of depression as one more cerebellar dysfunction was revealed by recent studies, and have been shown as a psychiatric disorder manifested greatly by the deprivation of cerebellar connections limbic input, justified in vermis's lesions. Related to this idea, neuroimaging studies provide empirical experiences in complete compliance with the affective and cognitive dysfunction present in depression. In addition to demonstrating the benefit and relief of symptoms of depression in human beings, while the electromagnetic stimulation of the cerebellar surface. **Conclusion**: Certainly the relationship between depression and cerebellar activity are closely correlated, however, there is still no direct evidence showing how the interaction of frontal-cerebellar connectivity with abnormal cognitive function in depression is executed.[4] So far, advances in imaging technologies promise to constitute a definition of this fact.