Journal of cancer clinical research

Ultrastructural study of samples of the left temporal lobe in the brains of foetuses of schizophrenic mothers

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Abstract

The neurodevelopmental hypothesis of schizophrenia is considered one of the most consistent at this time. It is based on a series of evidences that guide towards a condition during pregnancy. Minor physical abnormalities in schizophrenia are due to some condition suffered by the foetus during the second trimester of pregnancy and are more common among patients than in the general population. A virus acting during this critical stage of development, interacting or not with genetic factors, may be responsible for the biological events that appear later and that could be 1 2nd degree Specialist Neurologist. Psychiatric Hospital of Havana 2 Doctor of Science 2nd grade specialist in Pathological Anatomy Institute of Nephrology 3 Doctor in Morphological Medical Sciences 2nd grade specialist in Histology 2 related to the reactivation of its latency. In this paper, additional results are presented in an ultra-structural study carried out in samples of the left temporal lobe of foetuses of schizophrenic mothers aborted for medical reasons. The findings obtained are compatible with an active infection of the nervous system by the Herpes simplex hominis virus type I (HSV1), taking into account this and previous results. Until the current publication, the evidence supporting the concept of virus-cell interaction in the neurodevelopmental hypothesis of schizophrenia had been indirect. This work is the first direct evidence demonstrating the presence of viral particles in the central nervous system of foetuses from schizophrenic mothers in the critical period of the second trimester of fatal development. The importance of this finding may have practical applications in the prevention of schizophrenia, taking into account its direct relationship with the ethology and pathophysiology of this disease.

Biography

Segundo Mesa Castillo a specialist in Neurology, he worked for 10 years in the Institute of Neurology of Havana, Cuba. He has worked in Electron Microscopic Studies on Schizophrenia for 32 years. He was awarded the International Price of the Stanley Foundation Award Program and for the Professional Committee to work as a fellowship position in the Laboratory of the Central Nervous System Studies, National Institute of Neurological Diseases and Stroke under Dr Joseph Gibbs for a period of 6 months, National Institute of Health, Bethesda, Maryland, Washington DC USA, June 5, 1990. At present, he is a member of the Scientific Board of the Psychiatric Hospital of Havana and gives lectures to residents in psychiatry

Citation: Segundo Mesa Castillo, Ultrastructural study of samples of the left temporal lobe in the brains of foetuses of schizophrenic mothers, Cancer Summit 2020, 3rd Global Expo on Cancer and Oncology Research, July 30, 2020, 07