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Neuromuscular Stimulation

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The prevalence of vascular diseases in HIV (human immunodeficiency virus) -infected individuals has been comprehensively investigated. However, their incidence of ischemic cerebrovascular events has not been thoroughly examined. Our aim was to examine the rate of ischemic stroke or TIA (transient ischemic attack) in a defined HIV population and to find the risk factors that are characteristic in this population. A case-controlled retrospective cohort study of HIV patients followed up at Kaplan Medical Center between 2009 and 2017 was performed. The study included 300 patients who had been compared to a matched age and gender group. The data was collected by reviewing patients' files and imaging studies. The first goal was to compare the incidence of ischemic cerebrovascular events in both groups. Secondary endpoints were to characterize the types of cerebrovascular events and risk factors in the study group versus the general population. There were more ischemic stroke cases in the study group vs. the control group. After adjusting for vascular risk factors in a multivariate analysis, the odds ratio for a cerebrovascular accident in the HIV patient group was 2.29 (p=0.057). Notably, in the comparative group, the vascular risk factors' rate (hyperlipidemia, IHD and smoking) was higher than in the HIV group. In this study, ischemic cerebrovascular events were more common in HIV-infected patients than in the control group, in spite of the fact that they had fewer vascular risk factors. Combination antiretroviral therapy (cART) has significantly improved the life expectancy of individuals infected with the human immunodeficiency virus (HIV) with up to 30% of adults with HIV in high-income countries living to the age of 50 or more. Moreover, most patients on cART today will be above 50 in 2030, so therefore, studying the incidence and prevalence of aging related conditions including cardiovascular diseases in this population becomes more and more important. Stroke is one of the most important health problems worldwide. It shares common risk factors, such as hypertension, aging, diabetes mellitus, hyperlipidemia, and smoking with other cardiovascular diseases. In addition, infectious agents such as HIV have been found to increase the risk of stroke.

Little data exists in quantifying the risk of HIV associated stroke. Furthermore, most studies fail to distinguish between strokes caused by medical conditions associated with HIV, such as lymphoma, opportunistic infections or endocarditis and strokes resulting from an as of yet undetermined HIV related process. Some possible mechanisms have been hypothesized to account for strokes in the context of HIV infections, including a pro thrombotic state and a covert vasculopathy. Unlike cardiovascular diseases, which have been extensively studied, only a few population-based studies have addressed the association of HIV and stroke. Most studies that investigated this issue were performed in younger AIDS patients before the implementation of antiretroviral therapies (ART). The incidence of stroke, specific characteristics, and stroke risk factors in HIV infected populations remain in question.To address these issues, a case-controlled study was conducted and performed in an HIV infected population, who were followed up in an HIV clinic. The study which sought to determine the ischemic stroke incidence and specific characteristics in this population compared to a general one. Our secondary goal was to provide insights into the contribution of the HIV infection state and ART to ischemic cerebrovascular events, i.e. etiology versus the traditional vascular risk factors.The primary endpoint was the odds ratio of ischemic cerebrovascular events in HIV infected patients compared to the control group. There was also an attempt to define stroke features in the study population, and find out whether there is a relationship between the type of antiretroviral therapy and stroke.

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