

Stroke in patients with acquired immunodeficiency syndrome

Accidente cerebrovascular en pacientes con síndrome de inmunodeficiencia adquirida

Otto Jesus Hernandez Fustes^{1*} <https://orcid.org/0000-0003-0778-5376>

Carlos Arteaga Rodriguez² <https://orcid.org/0000-0001-5869-2052>

¹Hospital das Nações, Serviço de Neurologia. Curitiba PR, Brasil.

²Universidade Positivo, Departamento de Medicina. Curitiba PR, Brasil.

*Corresponding author: otto.fustes@hc.ufpr.br

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Dear Editor

We would like to contribute with an interesting clinical finding, of an study from southern Brazilian that may highlight the discussion about the importance of stroke and Human Immunodeficiency virus (HIV). In patients with Acquired Immunodeficiency Syndrome (AIDS), cerebrovascular disease (CVD) occurs more frequently than in the rest of the population. CVD is an important cause of morbidity/mortality in patients with AIDS, and there are data in the literature that suggest an increase on CVD in patients with AIDS, in contrast to the decrease on CVD rates in general.^(1,2)

HIV is neurotropic, neuroinvasive and neurovirulent, and it is associated with cerebral arteriopathy characterized by occlusive and aneurysmal lesions, with endothelial dysfunction and arterial inflammation as predisposing factors for the atherosclerotic process.^(2,3)

A greater number of AIDS patients have been reported to abuse substance, alcohol and tobacco, in addition to diabetes mellitus, systemic arterial hypertension and premature aging, factors that could increase vascular risk.⁽⁴⁾

An observational, and descriptive study is already retrospective was carried out on the medical records of patients admitted to a University Hospital in southern Brazil, over a period of thirty months, through the services of Infectious Diseases and Neurology, diagnosed with AIDS and notified to the Hospital Infection Control Center. The diagnosis of AIDS during hospitalization was based on clinical criteria, anti-HIV antibodies positive and confirmation by the Enzyme-Linked Immunosorbent Assay method, they did not receive antiretroviral therapy. The treatment and CD4 count measurement were performed in outpatient follow-up.

On the 82 AIDS patients hospitalized during the analyzed period, 28 presented neurological manifestations, and of them 10 patients (12.19%), diagnosed with CVD by the presence of acute focal neurological manifestations with compatible neuroimaging (CT and MRI) tests were studied, 60% male with aged between 22 and 63 years (mean 35,7 years). Nine patients had ischemic CVD (90%). Demographic data, clinical manifestations and vascular risk factors (VRF) and evolution are shown in table.

Table - Clinical and demographic characteristics

No.	Age	Genre	Neurological manifestations	Risk factor*	Stroke type	Evolution
1	22	Female	Headache, amaurosis, hemiplegia	DM, CU	Ischemic	Death
2	37	Male	Dysphasia, hemiplegia	D, S, C	Ischemic	Death
3	26	Female	Headache, ptosis	CU	Ischemic	-
4	24	Female	Headache, dysarthria, amaurosis	DM, CU	Ischemic	-
5	42	Male	Mental confusion	AH	Ischemic	Death
6	33	Female	Headache, ophtalmoplegia	CU, AH	Hemorrhagic	
7	30	Male	Hemiplegia	DM	Ischemic	Death
8	47	Male	Ataxia, Dementia	AH, C, D	Ischemic	-
9	63	Male	Hemiplegia, aphasia	AH, D	Ischemic	-
10	31	Male	Headache, mental confusion	S, A	Ischemic	-

* DM: diabetes mellitus, CU:contraceptive use, D: dyslipidemia, S: smoking, C:cardiopathy, AH: arterial hypertension, A:alcoholism.

Despite the small sample size, we believe that the results could contribute to the knowledge of the complex relationship between CVD and AIDS. In our series, CVD was an important cause of hospitalization and death.

We found several VRF, with arterial hypertension (40%), diabetes mellitus (30%) and heart diseases (20%) the most frequent. We did not find any abuse of psychoactive substances and the brain-imaging exam ruled out the diagnosis of

vasculitis. Regardless of the origin of the VRF, its control is necessary, either with hygienic / dietary measures and appropriate therapeutic interventions. These interventions could be the subject of case-control research to define their preventive role for CVD in AIDS.

It drew attention that the four women with ischemic CVD, were using oral contraceptives (OCP) which as is known increases the risk of CVD. This finding is considered to justify avoiding the use of OCP in women with AIDS. On the other hand, it has been suggested that endogenous estrogen has a protective mechanism in women with AIDS and that the disease could be associated with a menopausal process that could favor the onset of atherosclerotic disease.

In conclusion, ischemic CVD was the predominant one, associated with traditional VRFs for atherosclerotic disease, with the hypothesis of two possible causal mechanisms of the early atherosclerotic process. Therapeutic intervention of VRFs is recommended and avoid the use of OCP in women.

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