

Design/Methods

NA.

Results

A 47-year-old man with a history COVID-19 presented with subacute lower extremity weakness, erectile dysfunction, and gait instability with falls. His symptoms started several weeks after COVID-19 vaccination which he underwent 3 months after COVID-19 infection. His initial exam demonstrated weakness at the knees and ankles and extensor plantar responses. MRI demonstrated innumerable enhancing lesions involving the subcortical white matter, basal ganglia, thalami, brainstem, cerebellum, and the entire spinal cord parenchyma. CSF testing revealed a lymphocytic pleocytosis (10 WBC, 88% lymphocytes), and transient matched serum and CSF oligoclonal bands. Testing was unremarkable for infections, malignancies, primary demyelinating conditions, etc. He responded dramatically to five days of high dose methylprednisolone but had recurrence of symptoms with weaning of oral prednisone, requiring another pulse of IV steroids. After 2 months, his steroids were weaned again, with clinical and radiographic recurrence, requiring another course of IV steroids. He was subsequently transitioned to mycophenolate as a steroid-sparing agent. Literature review identified 20 additional cases of CNS neuroinflammatory disease after either SARS-CoV-2 infection or vaccination (11 transverse myelitis, 6 optic neuritis, 3 encephalomyelitis).

Conclusions

Our patient's steroid-dependency and relapsing course suggests unmasking of an underlying CNS neuroinflammatory condition. Temporal associations of neurological conditions with vaccinations or infections do not prove causality despite previous reports of such sequelae. Vaccines containing SARS-CoV-2 antigens may enhance autoimmunity by mechanisms including polyclonal activation, epitope spreading, or molecular mimicry. This case highlights that the resulting inflammation may be insidious and extensive, though treatable. As COVID-19 constitutes a life-threatening infection in some patients, the benefits of vaccination outweigh the smaller risk of unmasking an immune-related condition.

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Characteristics and Evolution of Cerebral Aneurysms Among Adults Living With HIV: A Retrospective, Longitudinal Case Series

Emily I White, Pria Anand, Anna Marisa Cervantes-Arslanian

Objective

To describe the characteristics and evolution of cerebral aneurysms in a large cohort of adults living with human immunodeficiency virus (ALWH).

Background

HIV-associated vasculopathy, which can predispose to cerebral aneurysm development, may result from an inflammatory process whereby HIV viral proteins lead to increased chemoattractant and adhesion particles in the vessel wall. Additionally, adventitial layer inflammation has been shown to be strongly associated with HIV infection and vascular changes that may lead to cerebral aneurysm formation. A recent population-based matched cohort study demonstrated a higher rate of subarachnoid hemorrhage in ALWH. It is important to expand the current understanding of risk factors for aneurysm development and the longitudinal course of patients with HIV-associated vasculopathy to help reduce this source of potential morbidity.

Design/Methods

The Clinical Data Warehouse was queried for all adult patients evaluated at Boston Medical Center between January 1, 2000, and October 22, 2021 with a history of HIV and at least one cerebral aneurysm. Charts were reviewed for variables including timing of HIV and aneurysm diagnoses, antiretroviral (ART) duration, additional aneurysm risk factors, development of new aneurysms/growth of existing aneurysms, interventions, and clinical outcomes.

Results

A total of 50 patients (52% female) were identified, including 82 cerebral aneurysms. Forty-six percent of patients with a nadir CD4 count less than 200 cells/mm³ (N = 13) developed new aneurysms or were found to have aneurysm growth over time compared with 29% of patients with a CD4 nadir above 200 cells/mm³ (N = 21). New aneurysms were found or existing aneurysms grew in 67% of those not on ART at time of aneurysm diagnosis (N = 6), 38% of those with inconsistent ART use (N = 8), and 21% of those with consistent ART (N = 19).

Conclusions

Among ALWH, lower CD4 nadir and inconsistent ART use may contribute to aneurysm formation or growth. Further studies are needed to more thoroughly characterize this trend.

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Headache as Initial Presentation of Human Chronic Necrotizing Granulomatous Meningoencephalitis

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Objective

Chronic necrotizing and granulomatous meningoencephalitis is an idiopathic inflammatory disease with possible autoimmune mediated delayed type hypersensitivity response. It commonly affects the central nervous system of dogs and cats. However, this inflammatory disease has rarely been described in humans.

Background

A 69-year-old right-handed woman presented with worsening subacute headaches that were intermittent, sharp and holocephalic in nature which worsened with coughing and/or laughing. Her initial neurological

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