DYSTONIA – AS PRESENTING SYMPTOM OF HIV ENCEPHALITIS

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ABSTRACT

Movement disorders could be a neurological complication of acquired immune deficiency syndrome (AIDS) and may be sometimes represent the initial manifestation of HIV infection. We present the case of a 16 years old male admitted in our department with dystonia – as presenting symptom of HIV encephalitis. In this case, we didn't disclose any opportunistic infections, but basal ganglia lesions and their connections damage are revealed by cerebral imaging.

Key words: dystonia, HIV, movement disorders, basal ganglia

INTRODUCTION

Movement disorders could be a neurological complication of acquired immune deficiency syndrome (AIDS) and may be sometimes represent the initial manifestation of HIV infection.

The most frequent hyperkinesias in HIV positive patients are hemiballism-hemichorea and tremor, but other movement disorders diagnosed in these patients include dystonia, chorea, myoclonus, tics, paroxysmal dyskinesias and Parkinsonism.

Patients with HIV and movement disorders usually present with other clinical features such as peripheral neuropathy, seizures, myelopathy and dementia.

Dopaminergic dysfunction and the predilection of HIV infection to affect subcortical structures are thought to underlie the development of movement disorders such as Parkinsonism in AIDS patients. Hyperkinesias result from lesions caused by opportunistic infections, particularly toxoplasmosis, which damage the basal ganglia connections.

CASE REPORT

We present the case of a 16 years old male patient admitted in our clinic for abnormal posture of the left inferior limb with subacute onset, 2 weeks after a respiratory infection.

Personal and family medical history were unremarkable. The patient was the product of a normal full-term pregnancy, with no prolonged neonatal jaundice; he developed normally since age of 16 years old, no personal history of illnesses and with no family history of neurological diseases.

The general examination was without clinical significance. The patient had stable vital signs, no fever, the chest X-ray and native CT examinations were negative.

Neurological examination disclosed a left inferior limb posture with internal rotation and eversion, left limbs ataxia and impairment of proprioceptive sense, Noica sign present bilaterally.

Encephalitis was suggested by the inflammatory tests (leukocytosis, elevated ESR), the CSF aspect (lymphocitic pleocitosis and modest increased protein content) and **EEG recording** (Fig. 1) with diffuse high-voltage, arrhythmic delta slowing in centro-temporal regions bilaterally.

Antiphopholipid antibodies and natural anticoagulants (protein C, protein S, antithrombin III) and immunological and rheumatological profile (rheumatoid factor, antinuclear antibodies) were negative. The levels of measles antibodies were not increased. Ceruloplasmine and copper serum levels, urinary copper excretion were normal.

The patient was found **HIV positive** (ELISA), with no serum detectable Toxoplasma antibodies.

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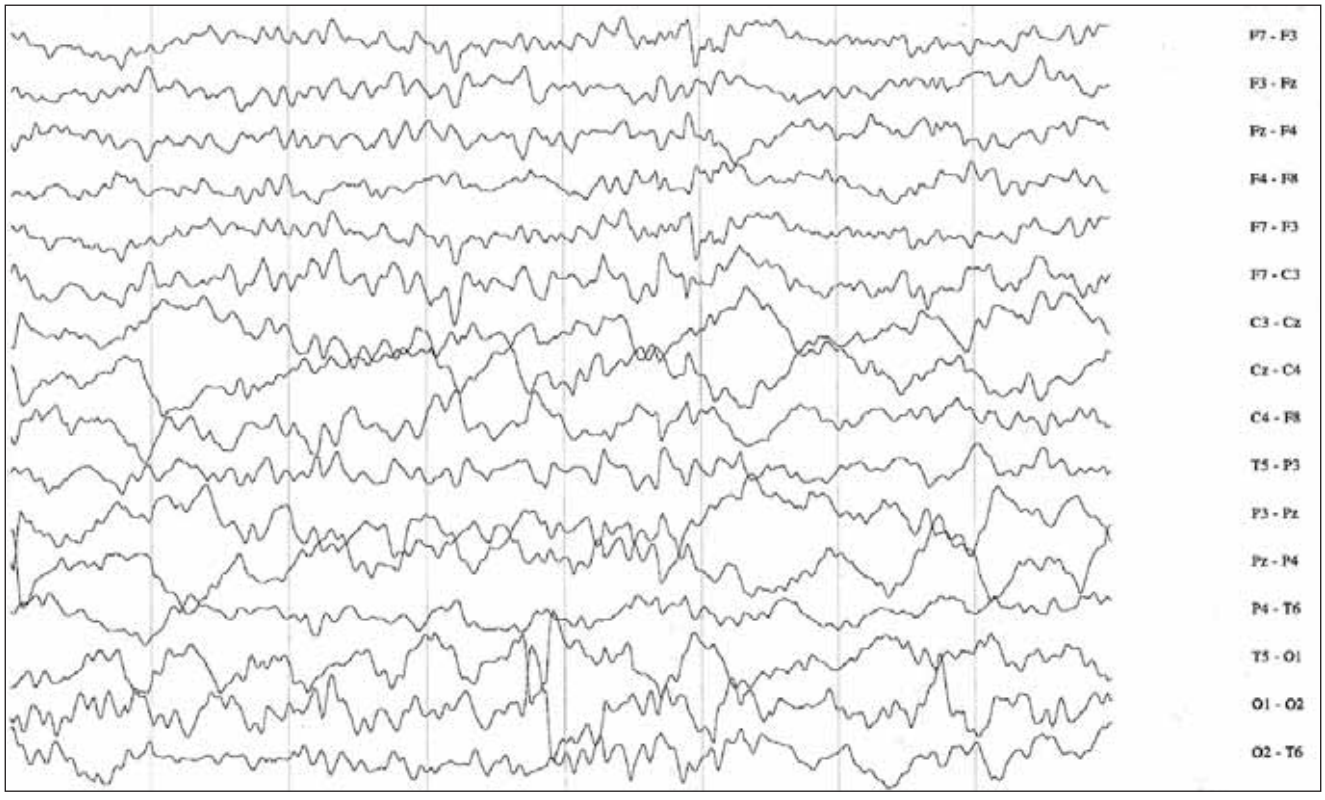

***Figure 1**. EEG recording – diffuse high-voltage, arrhythmic delta slowing in centro-temporal regions bilaterally*

Native cerebral CT scan (Fig. 2) **revealed** a hipodensity in the area of the right lenticular nucleus.

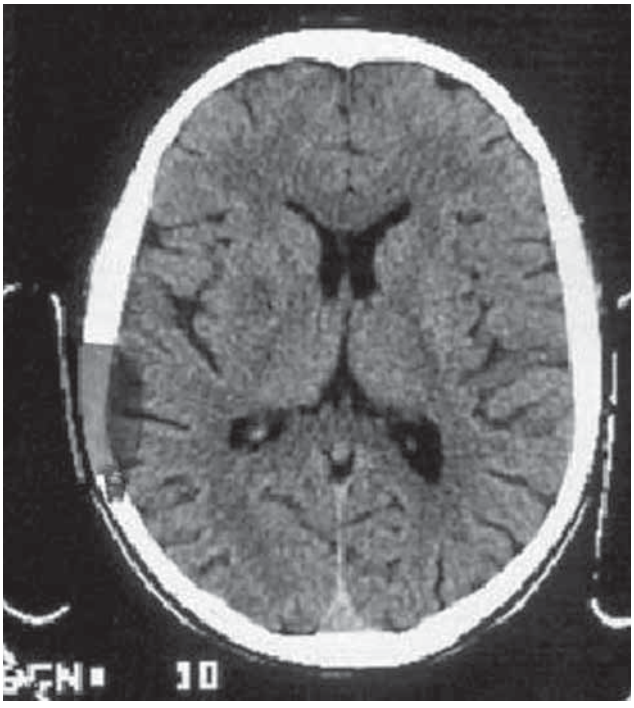

***Figure 2.** Native cerebral CT scan – hipodensity in the area of the right lenticular nucleus.*

Contrast enhanced cerebral MRI (Fig. 3) was suggestive for AIDS leuloencephalopathy – with bilaterally large areas of white matter T2 hyperintensities frontal, parietal and periventricular regions. No abscess-like lesion was present in basal ganglia.

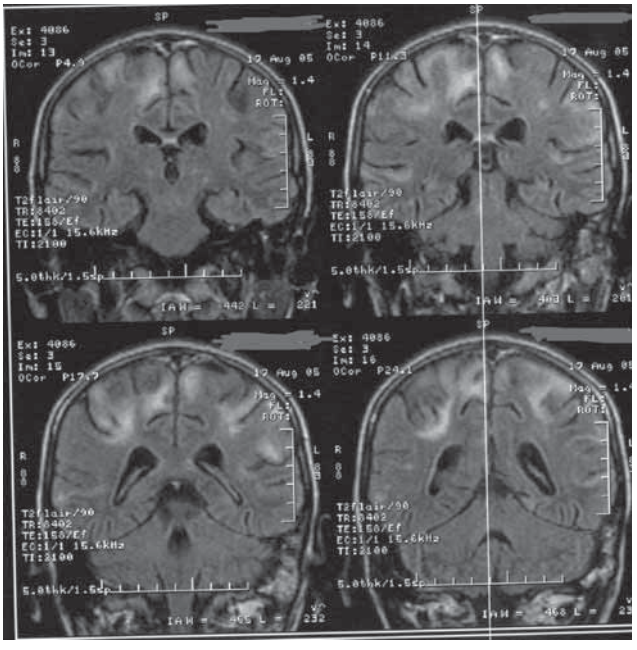

***Figure 3.** Contrast enhanced cerebral MRI - AIDS leuloencephalopathy (bilaterally large areas of white matter T2 hyperintensities frontal, parietal and periventricular regions; no abscess-like lesion in basal ganglia).*

The patient received symptomatic treatment for the movement disorder and was referred to infectious disease department in order to receive antiretroviral therapy.

DISCUSSION

From patient history, clinical and laboratory findings we ruled out kernicterus, herpetic encephalitis, SSPE (subacute measles encephalitis with immunosuppression), leukodystrophy, Wilson disease, cerebral vasculitis.

Dystonia is a rare complication of acquired immune deficiency syndrome (AIDS). Dystonia in AIDS patients may be caused by increased vulnerability of the basal ganglia to HIV infection or opportunistic infections, particularly toxoplasmosis, or due to lesions that damage the basal ganglia connections.

The management of patients who are HIV positive who present with movement disorders involves recognition and treatment of opportunistic infections, symptomatic treatment of the movement disorder and the use of highly active antiretroviral therapy (HAART).

Cerebral imaging in this case demonstrated frontal and/or parietal white matter lesions but also basal ganglia abnormalities. In this case, we didn't disclose any opportunistic infections, but basal ganglia lesions and their connections damage are revealed by cerebral imaging.

CONCLUSION

Movement disorders are a potential neurologic complication of acquired immune deficiency syndrome (AIDS), and may sometimes represent the initial manifestation of HIV infection.

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