

CASE REPORT

An Early Presentation of Neurosyphilis as Persistent Headache and Ophthalmoplegia

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Abstract:

Neurosyphilis can present with a wide spectrum of clinical symptoms and can lead to severe morbidity and mortality, in case of delayed diagnosis and treatment. Although it is often and inaccurately described as a type of tertiary syphilis, the involvement of the central nervous system (CNS) can begin early in the progression of the disease and CNS disorders may be primary presenting symptoms. We report a case of isolated third nerve palsy (TNP) and persistent headache secondary to neurosyphilis that demonstrates clearly the early involvement of CNS in the progression of the disease. The prompt detection of his condition led to a full recovery of the symptoms. Clinical awareness of this multifactorial condition is very important, in order to suspect, recognize it and provide treatment before major complications.

Key words: Neurosyphilis; Ophthalmoplegia; Headache

Introduction

Syphilis is a sexually transmitted, chronic, systemic infection of increasing prevalence. In European countries, it is considered a re-emerging infectious pathology (Turchetti et al, 2012).

It is characterized by a wide variety of clinical presentations, including ocular symptoms, which may develop at any stage of the disease process (Katarzyna et al, 2012).

We present a male patient with isolated third nerve palsy (TNP) secondary to neurosyphilis.

Case Report

A 65-year-old male without other significant medical history presented with persistent headache in the right orbit and diplopia over the last four days.

The neurologic examination revealed ipsilateral, isolated, pupil-sparing TNP with partial external dysfunction.

All routine laboratory results, including inflammatory markers and thyroid parameters, were normal. Computed tomography angiography of the brain detected no intracranial aneurysm. Magnetic resonance imaging of the brain and orbits revealed no structural abnormalities. The orbital pain was relieved with oral methylprednisolone but the TNP showed no improvement.

On the second day of treatment the patient presented erythematous dermatitis on the body and vesicular lesions on the palms. Syphilis was suspected.

Serum rapid plasma reagent (RPR), Venereal Disease Research Laboratory (VDRL), reactive fluorescent treponemal antibody-absorption (FTA-ABS) and serum *Treponema pallidum* haemagglutination (TPHA) test were positive.

Cerebrospinal fluid (CSF) revealed a mild pleocytosis (20 lymphocytes / microliter) with high protein count (93, 3 mg/dl). Positive CSF TPHA titer and reactive CSF-FTA-ABS established the diagnosis of neurosyphilis (Harding and Ghanem et al, 2012). TNP was remarkably improved with intravenous penicillin. At two months follow-up, the patient was asymptomatic.

Discussion

Syphilitic infection of the nervous system can result in a chronic, insidious inflammatory process. Invasion of the CNS occurs early in the course of untreated syphilis (Zhou et al, 2012).

The clinical presentation can be heterogeneous including various signs and symptoms. However, many people think of tertiary syphilis when they use the term neurosyphilis. This is completely inaccurate

and it often leads to misdiagnosis. Neurosyphilis is characterized by any involvement of the CNS by syphilitic infection at any stage of infection.

Cranial neuropathies can frequently appear as signs of neurosyphilis (Knudsen and Marcio Sotero de Menezes 2001). Therefore neurosyphilis should always be taken into consideration as differential diagnosis of cranial nerve palsies, in cases where no other etiological factors can be detected (Seeley and Venna 2004).

Our patient presented with persistent headache and isolated, pupil-sparing TNP as an early manifestation of neurosyphilis. The prompt detection of this treatable disease led to a full recovery of his symptoms.

Patients with an isolated TNP may harbor underlying life-threatening conditions, such as aneurysm or cavernous sinus thrombosis and should be investigated thoroughly. Diagnosis of systemic diseases such as neurosyphilis is still frequently overlooked or delayed as a result of the variety of initial neurologic symptoms and the often subacute onset.

Clinical awareness of this multi-factorial condition is very important, in order to suspect, recognize it and provide treatment before major complications.

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