Short communication

Intermediate uveitis due to human T-cell lymphotropic virus type 1

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Article history:
Received 14 May 2010
Accepted 29 June 2011
Available online 28 May 2012

Keywords:
Human T-lymphotropic virus 1
Uveitis
Intermediate uveitis
Tropical spastic paraparesis
Retroviridae infections

Abstract

Case report: The case of a 66-year-old woman with intermediate uveitis in both eyes and progressive weakness of lower limbs is reported. A human T-lymphotropic virus type 1 (HTLV-1) infection was detected in the serological study, with the patient being diagnosed with tropical spastic paraparesis and HTLV-1 intermediate uveitis. The patient made good progress with oral steroid treatment.

Discussion: The clinical and epidemiological aspects of HTLV-1 infection are discussed. We recommend a serological determination of the virus in intermediate uveitis of unknown origin in people from endemic areas or with neurological symptoms.

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Uveitis intermedia por virus linfotrope humano de células T Tipo 1

Resumen

Caso clínico: Se presenta el caso de una mujer de 66 años con uveitis intermedia bilateral y debilidad progresiva de miembros inferiores. En estudio serológico se detecta infección por virus linfotrope humano de células T tipo 1 (VLHT-1), siendo diagnosticada la paciente de paraparesia espástica tropical y uveitis intermedia por VLHT-1. La paciente evolucionó favorablemente con tratamiento corticoideo oral.

Discusión: Se comenta la clínica y la epidemiología de la infección por VLHT-1. Se recomienda la realización de serología para el virus en uveitis intermedias no filiadas en inmigrantes de áreas endémicas o con síntomas neurológicos.

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Introduction

Various ocular expressions have been described for uveitis due to human T-cell lymphotropic virus type 1 (HTLV-1), with intermediate uveitis probably being the best known. Infection due to this virus is highly infrequent in Spain and its prevalence is higher in the immigrant population from endemic regions. This paper describes a case of a native patient with intermediate uveitis due to VLHT-1 and myelopathy.

Clinic case

A female, aged 66, referred to our services due to uveitis clinic in right eye starting one year back. The patient referred diminished vision in said eye but did not refer miosis or metamorphopsia. The medical history related by the patient included an intracranial hemorrhage 12 years ago that required surgery and transfusion of 2 hematite concentrate units.

The ophthalmological exploration revealed a best corrected visual acuity (BCVA) of 8/20 in the right eye and 10/20 in the left eye. The slit lamp assessment showed cellular remains in the vitreous without signs of activity. The ocular fundus assessment showed epimacular membrane in both eyes (Fig. 1). No retinal vasculitis signs were found and no snowballs or snowbanks were identified. The optic coherence tomography confirmed the epimacular membrane (Fig. 2). The diagnosis was intermediate uveitis of unknown etiology.

In the following months the patient developed a progressive weakness in the lower limbs, to the point of referring inability to walk. In addition, she visited the practice due to an episode of vitritis ++ that remitted with transsceptal triamcinolone (TRICON depot).

In what concerns the etiological study, after discarding the causes of the neurological condition with normal nuclear magnetic resonance and due to the association of uveitis and idiopathic myelopathy with patellar hyper-reflexia, serology for VLHT-1 was requested. This study gave a positive result for enzyme immunoanalysis (EIA) for antibody detection against VLHT-1 (ABBOTT HTLV-1/HTLV-2, Innogenetics N.V.). The EIA samples were analyzed with an immunoblot strip (INNO-LIA MHTLV 1/II, Innogenetics N.V.), which confirmed the presence of antibodies against HTLV-1. Accordingly, the diagnosis was tropical spastic paraparesis and intermediate uveitis due to VLHT-1. The patient was prescribed treatment with oral prednisone which improved the neurological clinic as well as the BCVA, reaching a vision of 14/20 in the right eye and 18/20 in the left eye.

Discussion

The induction of intermediate uveitis due to VLHT-1 in the context of a systemic infection is known since 1992 when it was described in Japan after finding higher rates of infection in patients with uveitis of unknown etiology together with viral particles and increased numbers of infected cells in the eye. As far as we know, this case represents the first case of uveitis due to VLHT-1 described in our country. The key to achieve the diagnosis was the presentation of uveitis in the context of its numerological clinic.

VLHT-1 is a retrovirus that was first isolated in 1980. Its form of transmission is usually vertical through lactation in endemic regions. Contagion can also occur due to sexual contact and parenteral pathway, with transmission being the most efficient way. At the systemic level it produces basically 2 clinical conditions, i.e., tropical spastic paraparesia/myelopathy associated to VLHT-1 and T-cell leukemia/lymphoma. Our patient exhibited the former condition, which typically appears in women aged 50 with progressive weakness beginning in lower limbs and related to frequent autoimmune problems such as polymiositis, arthritis, Graves’ disease and others.

At the ocular level, VLHT-1 involvement produces 3 types of expressions: intermediate uveitis in 13% of infections, usually in the form of moderate acute vitritis accompanied by slight iritis and slight retinal vasculitis (up to 60%); dry eye up to 37% due to lacrymal gland lymphoplasmocitary infiltrates and interstitial keratitis in 10%, typically as peripheral anterior stromal whitish opacities. In our case we found intermediate uveitis accompanied by slight iritis but without signs of vasculitis.

In Spain, the prevalence of VLHT-1 in the general population is under 0.1% although it is closer to 1% in the case of immigrants from sub-Saharan Africa. There are about 100 patients diagnosed with infection by this virus, most of them immigrants (63 immigrants affected). The endemic regions are mainly Japan where over 10% of the population is affected, as well as the Caribbean region with a prevalence between 3% and 6%, and sub-Saharan Africa and South America, particularly the indigenous or African descent population. In our patient, from the northeastern Spanish region of Galicia who had never traveled abroad and did not refer risk factors for sexually transmitted diseases and whose partner was seronegative for the virus, the contagion pathway could have been a blood transfusion received 20 years ago. Despite the extremely low prevalence in the Spanish population, individuals receiving blood transfusions could exhibit a probably very low risk of being infected due to the fact that
serological studies for this virus are not carried out by blood banks as standard procedure.

As conclusion, we recommend the inclusion in the diagnostic protocol for intermediate uveitis the VLHT-1 serology for immigrants from endemic regions and patients exhibiting numerological clinic with uveitis.

Conflict of interests

The authors have not declared any conflict of interests.

REFERENCES