Short communication

Foveal hemorrhage in an immunocompetent patient with visceral leishmaniasis

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Objective: To report a case of foveal and macular intraretinal hemorrhages in an immunocompetent male patient with visceral leishmaniasis.

Case report: An immunocompetent, 42-year-old male, presented with progressive visual loss and metamorphopsia in his right eye. The fundus examination showed a foveal round yellow lesion and intraretinal hemorrhages in the macula. The patient was hospitalized with fever, anorexia, weight loss, hepatosplenomegaly, and progressive anemia. Laboratory studies were conducted and a positive test for leishmaniasis and hepatitis A was reported. Treatment was begun with amphotericin B 50 mg/day up to a total dose of 1400 mg.

Conclusion: Bilateral retinal hemorrhages in an endemic country could suggest the diagnosis of visceral leishmaniasis.

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Hemorragia foveal en paciente inmunocompetente con leishmaniasis visceral

Resumen

Objetivo: Comunicar un caso de hemorragias foveal e intraretinal macular en paciente inmunocompetente con leishmaniasis visceral.

Caso clínico: Hombre de 42 años inmunocompetente, se presentó con pérdida visual progresiva y metamorfopsia en el ojo derecho. En el examen del fondo de ojo se encontró una lesión amarilla redonda foveal y hemorragias intraretinales en la mácula. El paciente...
Introduction

Leishmaniasis is a tropical disease that involves either the immune system (visceral leishmaniasis [VL]) or the skin (cutaneous leishmaniasis).\(^1\) This disease is caused by Leishmania protozoa and is transmitted by the sand fly bite (Phlebotomus).\(^2\)

Leishmaniasis is considered to be one of the “unattended tropical diseases” which symbolize one of the largest sources of disparities\(^3\) between human beings in what concerns health: Asia, Africa and South America are the most affected continents.\(^2\)

Even though leishmaniasis is endemic in South America, it is not easy to identify for ophthalmologists and ocular expressions of this disease are generally a clinical challenge.

A case of VL is described with yellowish foveal lesion and bilateral retinal hemorrhages in a patient who is not immunologically compromised.

Case report

Male, 42, residing in the city of San Lorenzo, Paraguay, examined in the ophthalmology clinic of the Vision Foundation. The patient was referred to the tropical infectious disease department after referring progressive central vision loss and metamorphopsia in the right eye (RE) with one-month evolution. The previous month, the patient had been hospitalized due to fever, anorexia and loss of weight (27 kg in 30 days), hepatomegaly and splenomegaly. The patient’s dog was diagnosed with leishmaniasis, confirmed by positive observation in the autopsy. After biochemical analysis of the patient, the physicians confirmed the diagnostic of VL and hepatitis A.

In the ophthalmological examination, corrected visual acuity (CVA) was of 20/100 in the RE and 20/30 in the left eye (LE). Amsler’s test revealed central scotoma only in the RE. Slitlamp examination did not produce any peculiarities in any of the eyes.

Ocular fundus showed an elevated, yellowish, oval shaped lesion with well-defined edges and red blood at the edges (Fig. 1). The Watzke-Allen sign was positive in the RE, while the LE exhibited 2 intraretinal hemorrhages in the macular area, located in the superior and inferior temporal arch as shown in Fig. 1.

RE optic coherence tomography showed an intraretinal foveal lesion as a highly reflective intraretinal mass compatible with foveal hemorrhage in chronic phase, which explains its yellowish color and reddish edges and demonstrate different evolution phases of the hematoma.

Laboratory studies confirmed severe anemia and ELISA rK39 test was positive for VL. HIB and VDRL were negative.

Treatment was established with complete blood transfusions and 50 mg/day of amphotericin B up to completion of 1400 mg dose.

One month later, the RE foveal lesion and retina hemorrhages in both eyes had disappeared. CVA improved to 20/70 in RE and 20/25 in LE. Amsler’s test remained altered in RE but with diminished central scotoma.

Discussion

The case of a patient with hemorrhage in different phases of foveal evolution in one eye and retinal hemorrhages in both eyes is presented. The patient improved after treatment with systemic amphotericin B.

VL is endemic in Latin America. Recently, it has been considered as an emerging infection in tourists visiting the region.\(^4\) Even though the patient was not a traveler, he had a dog with VL which was the probable cause of the zoonotic disease.

Normally patients develop fever, weakness, anorexia, weight loss, hepatosplenomegaly, lymphadenopathy and progressive deterioration. Ocular leishmaniasis clinic includes eyelid skin ulcerations, conjunctivitis, interstitial keratitis, uveitis, glaucoma and loss of vision.\(^5\) Conjunctivitis, uveitis and retinal expressions have been described in the visceral disease form.\(^5\) The present patient was an immunocompetent adult with risk factors and systemic expressions, confirmed by ACT which revealed a foveal lesion that was a foveal hemorrhage in evolution and accordingly yellowish, as well as other retinal hemorrhages in the other eye.

Even in endemic countries, ocular leishmaniasis continues to be a challenge for physicians, and delays in diagnostic together with inappropriate treatments are frequently found.

In Paraguay, amphotericin B is preferred as initial treatment for said infectious disease as it exhibits over 90% of VL healing at a dose of 0.75 mg/kg during 15 days.\(^4\)

In conclusion, this paper describes a foveal hemorrhage secondary to VL with the presence of hemorrhages in different stages of evolution in the retina of both eyes. Early diagnostic and vigorous management could prevent blindness and life-threatening complications.
Fig. 1 – Left: ocular fundus photograph showing in RE a yellowish, elevated oval-shaped foveal lesion with well defined edges measuring approximately 500 × 300 μm with hemorrhagic edges illustrating the various degrees of reabsorption of the small intraretinal hematoma. The LE exhibits 2 flame-shaped intraretinal hemorrhages within the macular area, located in the superior temporal arches close to the inferior temporal arch. Right: OCT image showing a highly reflective foveal intraretinal lesion in the right eye.

Conflict of interest

No conflict of interest was declared by the authors.

REFERENCES