Review Article

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Ocular Syphilis, a Historical Disease in Modern Times, The Great Simulator

Roberto Varela Gress, Arturo Iván Pérez Pacheco* and María Inés Ortega Cervantes

Department of Ophthalmology, Research, Anterior Segment Service and Refractive Surgery, Innova Vision Clinic, Querétaro, Mexico.

***Correspondence:**

Arturo Iván Pérez Pacheco, Department of Ophthalmology, Research, Anterior Segment Service and Refractive Surgery, Innova Vision Clinic, Querétaro, Mexico.

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ABSTRACT

Ocular syphilis is a historical disease, which was considered only in the third world or developing countries and almost anecdotal, however, the achievements of recent years, thanks to debauchery and sexual freedom, have allowed it to permeate modern society. We present a 39-year-old male who goes for an eye examination for the first time with a 1-year history of depression, medicated by psychiatry with antidepressants, and with compound myopic astigmatism reported since childhood. He comes for the need to wear glasses, secondary to reporting significant visual loss gradually, with a predominance of the right eye (RE). The diagnosis and treatment are often at hand, cheaply and even free for most of the population, the challenge includes being able to suspect a young person, who does not present any specific characteristics and who subsequently debuts with skin lesions. In conclusion, thinking about the great simulator can save patients time, effort and a better prognosis in terms of their overall health.

Keywords

Ocular syphilis, Great simulator, HIV, Uveitis, Skin lesions.

Introduction

Ocular syphilis is a historical disease, which was considered only in the third world or developing countries and almost anecdotal, however, the achievements of recent years, thanks to debauchery and sexual freedom, have allowed it to permeate modern society. It is known as the great simulator, since its characteristics share common traits, from low-risk diseases to lethal ones. Ocular syphilis etiologically corresponds to Treponema Pallidum, an obligate parasite, Gram-negative, which as a reservoir for replication and housing, is found only in the human species [1-3].

In the consensus report from Spain published in 2024, they reported an incidence of 13.97 per 100,000 habitants, of which 6,613 new cases correspond to a documented period from 1995 to 2021. In addition, the age rate corresponds to young people between 25 and 34. Coinfection with HIV reached 33.9% and of them 9.21% with already known HIV.

The stages for its international classification are primary, secondary, early latent, late latent, unknown duration, tertiary, neurosyphilis, ocular, otic, and pregnancy syphilis. Neurosyphilis can be completely asymptomatic, but with signs of infection in the central nervous system, ocular syphilis, on the other hand, is nonspecific, manifesting as red, painful eye, so the range and spectrum of illness ranges from infections such as conjunctivitis, episcleritis, scleritis, uveitis up optic neuropathy, to posterior placoid chorioretinitis or necrotizing retinitis affecting any structure of the eyeball [4-6].

Diagnostic tests include direct tests such as polymerase chain reaction (PCR), whether of ulcerative lesions, as well as non-treponemal tests (antigens) and treponemal tests (antibodies).

Since 1943, first-line treatment should be started immediately, once the etiology is confirmed, with gold standard Penicillin G benzathine 2.4 international units intramuscularly, weekly dosage for the following 3 weeks. The treatment of ocular syphilis should be carried out in the same way as in the neurosyphilis regimen, with Penicillin G, 4 million units every 4 hours intravenously, in

addition to an oral supplement for two more weeks. With their respective follow-up at 3, 6, and 12 months. As well as guarantee its compliance, since failure to complete treatment, results in a new public health problem by not stopping the chain of contagion and transmission [7-12].

Case Report

We present a 39-year-old male who goes for an eye examination for the first time with a 1-year history of depression, medicated by psychiatry with antidepressants, and with compound myopic astigmatism reported since childhood. He comes for the need to wear glasses, secondary to reporting significant visual loss gradually, with a predominance of the right eye (RE).

The physical examination assessed visual acuity (VA) of 20/200 RE and 20/80 LE. Best-corrected visual acuity (BSCVA) 20/80 RE and 20/20 LE. Pachymetry of RE 520 microns and LE 497 microns, intraocular pressure (IOP) of 14 RE AND 16 LE. RE refraction: SpH -2.25 CyL -3.50 x 5° and LE SpH -1.75 CyL -4.50 x 160°. Keratometry with RE K1: 42.50, K2:46.00 x 9° and LE K1:42.25, K2: 46.25 x 161°. With biomicroscopy examination of the anterior segment without alterations, eyelid annexes, eyebrow and eyelashes without alterations, conjunctiva and sclera, euchromatic, without signs of infection or pain. In the other hand, clear, transparent cornea, Shaffer IV, iris with regular edges, with preserved reflections and translucent lens in both eyes.

Evaluation of the posterior segment under pharmacological dilation with tropicamide (0.8%) and phenylephrine (5.0%), where it is documented vitritis in RE,and for that reason, does not allow further details to be specified due to media opacity, in addition to papillitis and macular edema in LE. Figure 1.

Complementary tests were performed with Ocular Ultrasound Scan A-B (Figure 2) and Optic Coherence Tomography (OCT) (Figure 3) of both eyes; where it is confirmed total vitreous detachment of RE and LE, as well as serous retinal detachment LE.

Treatment is carried out with topical NSAIDs, and it is sent to the rheumatology service for evaluation of posterior uveitis and laboratory tests: hematological biometry, blood chemistry, acute phase reactants, human leukocyte antigen (HLA), and general urine examination. In addition, evaluation by the neurology service with contrast-enhanced magnetic resonance imaging of the skull and lumbar puncture was required.

The patient come again two weeks after the first evaluation, of RE data with flare in the anterior chamber, red eye and pain, with decrease in VA of: counting fingers at 2 meters, LE 20/80. Therefore, it was decided to apply a single dose of transseptal depot steroid and apply steroid drops in RE.

After the treatment, a month and a half later, he began to have skin lesions that appeared for the first time in his history, such as erythematosquamous, with a scaly collar on the palms, as well as on the lower extremities, for which he was sent to; dermatology service.

Furthermore, it was recorded by the rheumatology service with the etiology of Lupus erythematosus, Neurology tests results concluded with negative lumbar puncture, and negative MRI. The rest of the laboratory tests with leukopenia, with values below the minimum international cut-off, a negative general urine test, and the rest without alterations in the other cell lines.

An automated campimetry examination was performed for the visual field where an altitudinal defect in the RE visual field was observed.

Secondary to the findings or new discoveries, a new battery of laboratory studies was requested, serology tests for sexually transmitted diseases and venereal disease research laboratory test (VRDL) concluded positive and HIV positive also.

The patient is admitted to the internal medicine service and infectious disease service to complete an intravenous treatment

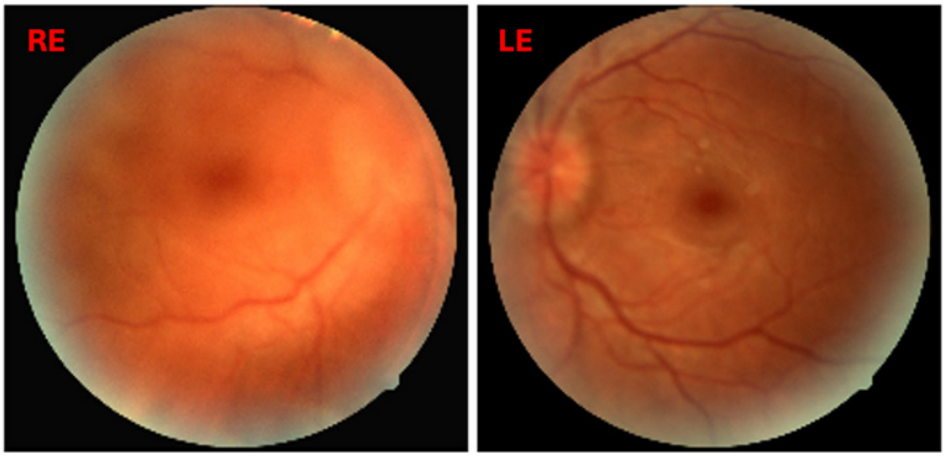

Figure 1: Retinography image of both eyes, with difficulty in appreciating structures due to RE vitritis, as well as LE with the presence of papillitis and macular edema.

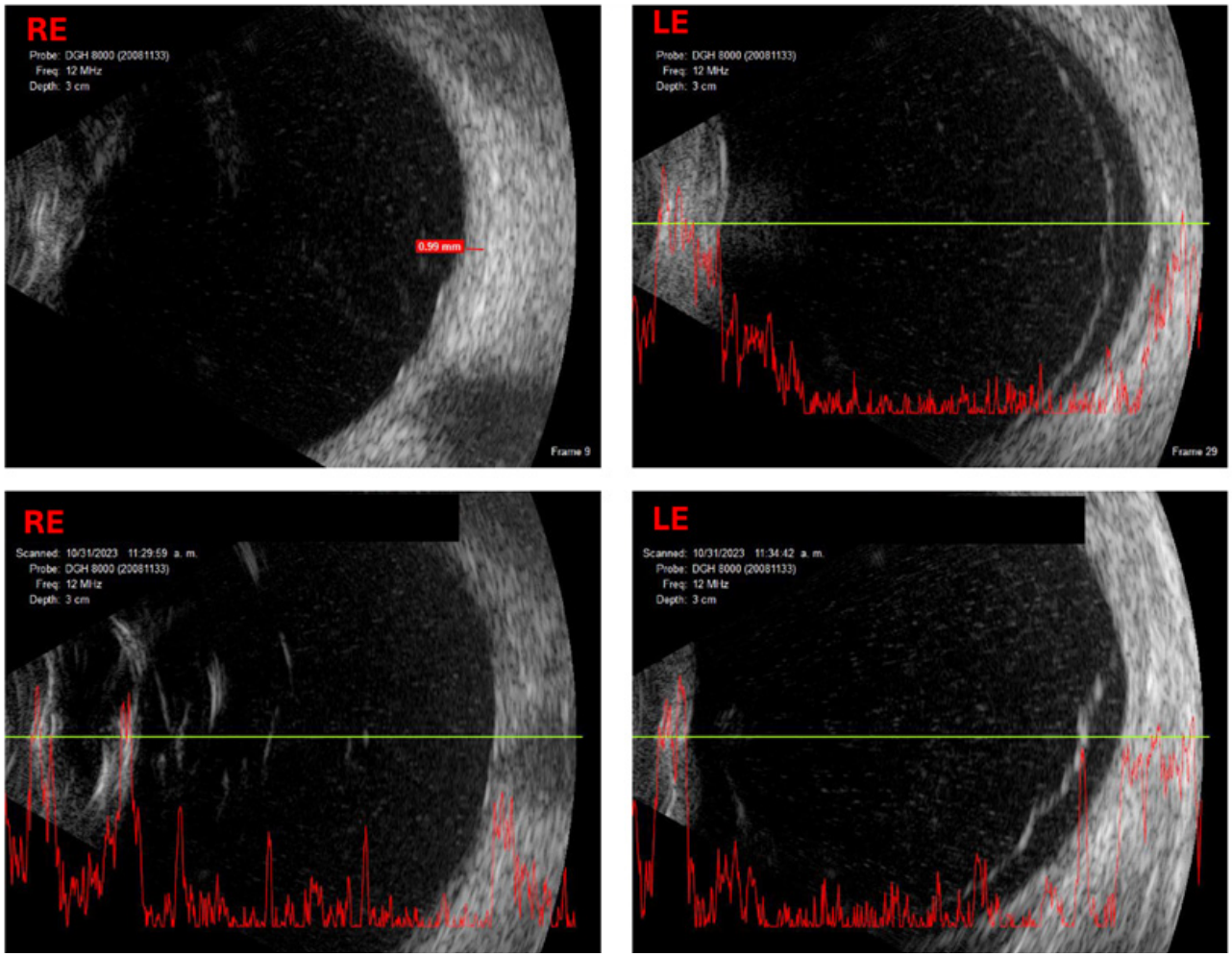

Figure 2: Ultrasound Scan A-B, where it is confirmed total vitreous detachment of RE and LE, as well as serous retinal detachment LE.

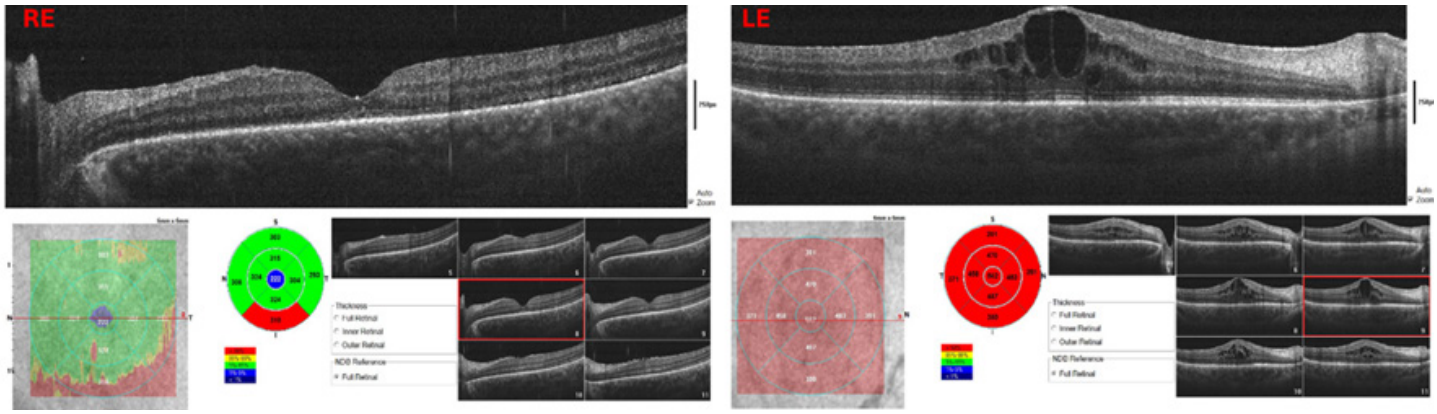

Figure 3: Optical coherence tomography of both eyes (OCT), where LE serous retinal detachment is confirmed.

regimen for ocular syphilis, with Penicillin G, 4 million units every 4 hours intravenously, in addition to an oral supplement for two more weeks. After treatment, it is corroborated by the service of Dermatology and Ophthalmology without injuries to the skin and fundus of the eye without sequelaes. BSCVA RE 20/60 and LE 20/50 (Figure 4).

Discussion

Thinking about a private hospital environment, this type of pathologies become a challenge, due to the difficulty and wide variety of presentations, which lead to simulating any other entity that is ultimately undiagnosed. The resurgence of ocular syphilis should alert all clinical disciplines since a multidisciplinary team makes treatment and follow-up possible [1-4].

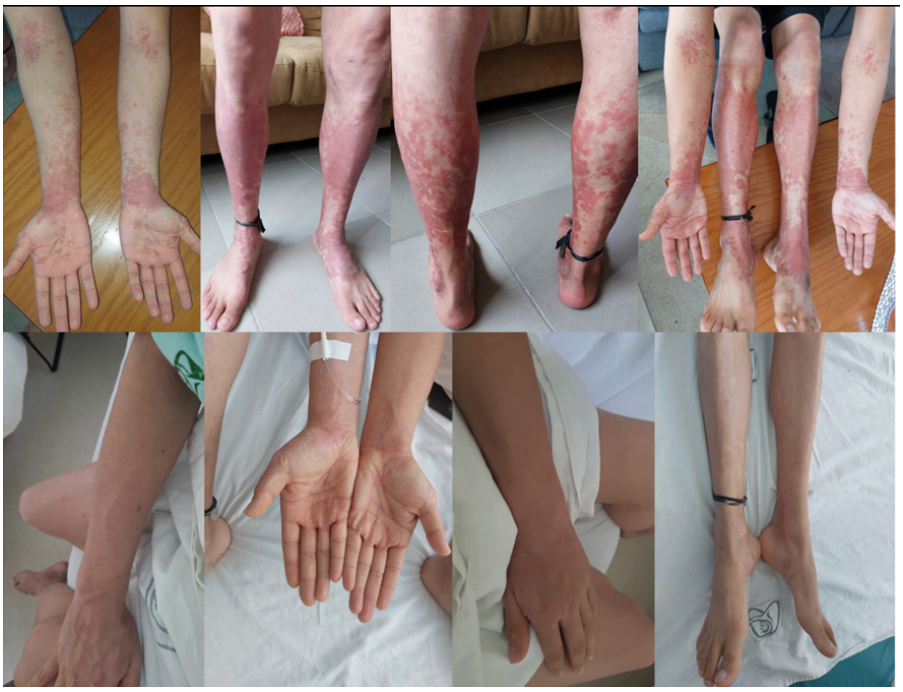

Figure 4: Skin lesions can be seen before and after treatment.

The diagnosis and treatment are often at hand, cheaply and even free for most of the population, the challenge includes being able to suspect a young person, who does not present any specific characteristics and who subsequently debuts with skin lesions.

Conclusions

In conclusion, thinking about the great simulator can save patients time, effort and a better prognosis in terms of their overall health [6-10].

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