

Retinal arteritis related to syphilis

Arterite sífilítica

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ABSTRACT

We present a case of neurosyphilis in a young man with a complaint of low visual acuity in the left eye. He had erythematous-scaly lesions on the palms of the hands, soles of the feet and oral ulcers, without genital lesions. The ophthalmic examination revealed arteritis in the upper nasal arcade in the affected eye. He presented VDRL (1:4096) and FTA-Abs positive. The cerebrospinal fluid cerebrospinal fluid test was negative. The treatment was performed with ceftriaxone 2g/day for 14 days, associated with prednisone 0.5mg/kg oral 48h after antibiotic onset. After 15 days of treatment, there was improvement of AV, regression of vasculitis and reduction of VDRL titration to 1:128.

Keywords: Vasculitis; Syphilis; Neurosyphilis; Uveitis; *Treponema pallidum*; Ceftriaxone

RESUMO

Apresentamos um caso de neurosífilis em um homem jovem, com queixa de baixa acuidade visual (BAV) em olho esquerdo. Curso com lesões eritemato-descamativas nas palmas das mãos, plantas dos pés e úlceras orais, sem lesões genitais. O exame oftalmológico revelou arterite em arcada nasal superior no olho afetado. Apresentou VDRL (1:4096) e FTA-Abs positivos. O exame do líquido cefalorraquidiano foi negativo. O tratamento foi realizado com ceftriaxona 2g/dia por 14 dias, associado à prednisona 0,5mg/kg oral 48h após início do antibiótico. Após 15 dias de tratamento, houve melhora da AV, regressão da vasculite e redução da titulação do VDRL para 1:128.

Descritores: Vasculite; Sífilis; Neurosífilis; Uveíte; *Treponema pallidum*; Ceftriaxona

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INTRODUCTION

Syphilis is a major sexually transmitted disease caused by infection with the *Treponema pallidum*.⁽¹⁻³⁾ It may be classified as early including primary, secondary and early latent syphilis, or late also known as tertiary syphilis or neurosyphilis. Most cases of ocular syphilis occur in the context of tertiary syphilis.⁽³⁻⁵⁾

Ocular syphilis accounts for approximately 0.1% of general ophthalmology care, and 2.5% of all cases of uveitis reported at a reference service for eye inflammation.⁽⁶⁾ As the number of cases has risen since 2010, this data may be underestimated.⁽⁷⁾ Uveitis is observed in 0.6% -2.0% of syphilis patients at any stage, and up to 9% of syphilis patients co-infected with HIV.⁽⁴⁾

The main ocular manifestations of syphilis include, in order of prevalence: retinitis, vitreitis, anterior uveitis, optic neuropathy, vasculitis, macular edema, retinal hemorrhage, retinal detachment, and scleritis.^(2,3,6, 8) Uveitis caused by syphilis may manifest as anterior and posterior uveitis or panuveitis.⁽⁴⁾ For some authors, vasculitis has a high incidence.⁽⁷⁾

With no typical ocular presentation, syphilis may be included in the differential diagnosis of any form of ocular inflammation,⁽⁶⁾ and it is important to include syphilis screening in routine laboratory tests of all patients with ocular inflammation⁽⁴⁾.

Ocular syphilis associated with vasculitis, vitreitis or anterior uveitis seems to be a reversible phenomenon responding well to appropriate antibiotic treatment, resulting in improved visual acuity.⁽⁶⁾ Therefore, early treatment ensures a good visual prognosis, whereas delayed therapy increases the risk of subsequent relapse.^(4,6)

In 2015, there was a shortage of penicillins, especially benzathine penicillin, due to the lack of specific raw material for its production in the global market. For this reason, the Ministry of Health recommended intravenous or intramuscular ceftriaxone as an alternative treatment for tertiary syphilis.⁽⁹⁾ This article describes a case of retinal arteritis related to syphilis treated with ceftriaxone with good clinical response.

Case report

DCS, male, 38 years old, white, previously healthy, referred to the uveitis department of Hospital Universitário Clementino Fraga Filho (HUCFF) of Universidade Federal do Rio de Janeiro (UFRJ) complaining of low visual acuity (LVA) in the right eye (OD) for 1 week. The patient was using prednisolone acetate 1% and topical tropicamide 1% and oral non-steroidal anti-inflammatory without improvement of the condition. On general physical examination, he had erythematous-scaly lesions on the palms and soles, ulcerated lesions on the oral mucosa (Figure 1), and denied genital lesions.

On ophthalmological examination, he presented visual acuity (VA) equal to 20/30, anterior segment biomicroscopy with 3+/4+ cellularity and anterior vitreous cells, and funduscopy with 1+/4+ vitreitis and vasculitis in superior nasal arch in the RE. The left eye (LE) examination showed no alterations to the eye examination. (Figures 2 and 3) The applanation tonometry was 08 mmhg in the RE and 12 mmhg in the LE.

Serology for herpes simplex, HIV, cytomegalovirus, toxoplasmosis, and syphilis was requested. It was positive only for



Figure 1: Erythematous-scaly lesions on the palm and sole, and ulcerated lesions on the oral mucosa, respectively

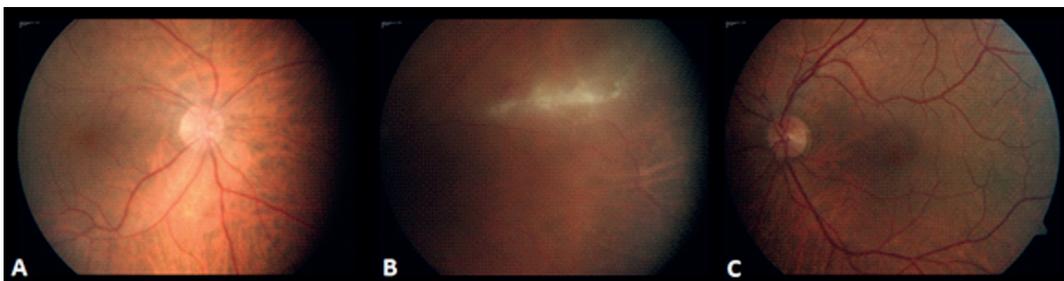


Figure 2: Retinography showing vitreitis and arteritis in the upper nasal arch in the right eye (A and B), and left eye without alterations (C)

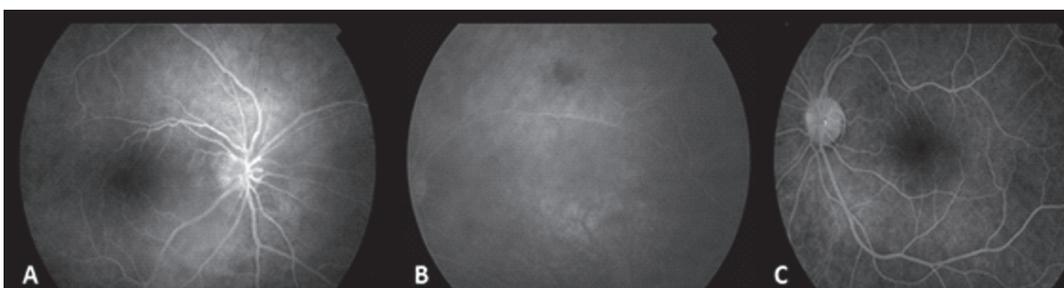


Figure 3: Fluorescein angiography: Right eye (A and B) corroborating vasculitis finding on retinography. Left eye (C) with no alterations

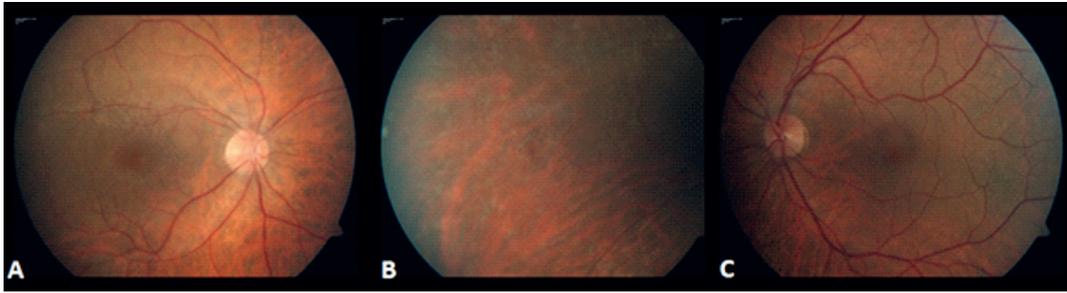


Figure 4: Retinography showing regression of vasculitis, onset of mild nasal blurring on optic disc, maintenance of 1+/-4+ vitreitis in the right eye (A and B), and left eye with no alterations (C)

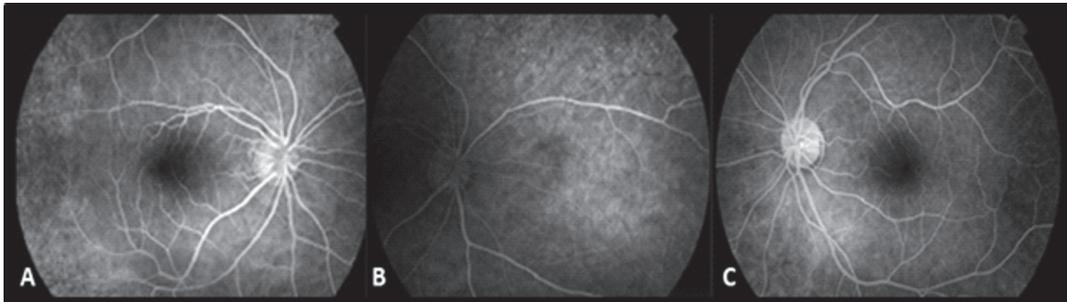


Figure 5: Fluorescein angiography: Resolution of vasculitis in the right eye (A and B), and left eye with no alterations (C)

VDRL with 1:4096 titration and for FTA-ABS IgG, with negativity for FTA-ABS IgM. CSF analysis showed normal appearance, cytology, protein and glucose levels, with non-reactive VDRL, HBSAg, HBc, HBcIgM, HBsAg and HCV.

After hospitalization, the patient was treated with intravenous ceftriaxone 2g/day for 14 days associated with oral prednisone 0.5mg/kg/day for 48h after onset of antibiotic therapy.

After 15 days of treatment, there was an improvement of VA to 20/25 in the RE, improvement of the anterior chamber cellularity, regression of vasculitis, onset of mild optic disc nasal blurring, maintenance of 1+/-4+ vitreitis (Figures 4 and 5) and reduction of VDRL titration to 1:128. After this appointment, the patient lost clinical follow-up.

DISCUSSION

Ocular syphilis is usually more common in men with bilateral involvement⁽⁶⁾, which differs from the present report in which there was unilateral involvement.

Following near-eradication with specific antimicrobial therapy, the incidence of syphilis has increased worldwide since the 2000s.⁽⁵⁾ However, 90% of new syphilis cases occur in developing countries,⁽⁵⁾ according to the increased incidence of syphilis in Brazil and Rio de Janeiro.⁽⁷⁾

Due to the wide range of clinical presentations of ocular syphilis,^(10,11) it is important to reiterate the inclusion of syphilis as a differential diagnosis for any form of ocular inflammation,^(6,5,12) especially posterior uveitis and optic neuropathy.⁽⁵⁾

Epidemiological data indicate that syphilis and HIV infection increase mimicry with Behçet's disease. Patients with uveitis, oral and genital ulcers can be easily diagnosed with Behçet's disease, as shown by Wand Y et al in young men with acute uveitis and a history of recurrent oral and genital ulcers who are mistakenly diagnosed with Behçet's disease.⁽¹³⁾ Regarding sexually transmitted infectious uveitis, serology for other sexually transmitted diseases, especially HIV, is important. In this case, HIV serology was negative.

CSF evaluation in patients with ocular syphilis is extremely

important because pleocytosis and increased protein concentration can often be observed. When present in co-infected with HIV, pleocytosis increases challenges in assessing both diseases, and may be present in syphilis infection alone.⁽¹⁾ In the patient reported, CSF was collected; however the cell was within normal range.

Positive VDRL in the CSF is considered the gold standard in diagnosis presenting good specificity with limited sensitivity. Other cerebrospinal fluid tests may be performed, and they include serological assays: FTA-Abs, haemagglutination assay of *Treponema pallidum* and molecular assays as PCR.⁽¹⁾ In the case reported, there was no positive VDRL in the CSF despite the high blood titration. However, due to the high specificity (99.13%) and low sensitivity (30-70%) of VDRL in the cerebrospinal fluid, false negative results are common, so a negative VDRL in the CSF cannot exclude the diagnosis.⁽¹⁴⁾

Syphilitic uveitis is one of the few eye entities that can be cured with appropriate antimicrobial therapy.⁽⁵⁾ Since the eye is an extension of the central nervous system, it is recommended that ocular syphilis be treated as neurosyphilis.⁽⁵⁾ Therefore, the gold standard treatment is crystalline penicillin. However, due to the shortage of this medication in Brazil at the time, ceftriaxone was used, although this therapeutics is not considered a cure criterion.⁽⁷⁾ The choice of medication was solely due to the unavailability of the first line drug, and was not relation to the contagion period.

For syphilis cure control, VDRL shall be negative in 25% after penicillin treatment, and this should be followed for 1 year in primary syphilis, 2 years in secondary syphilis, and 5 years in tertiary. In the case of an HIV positive patient, VDRL titration may remain positive even with the cure of the infection.⁽⁷⁾

Studies have been found in the literature showing the efficacy of ceftriaxone as an alternative to the treatment with penicillin G for neurosyphilis, as demonstrated by Agostini et al. in a study with 12 patients.⁽¹⁵⁾

The use associated with corticosteroids is controversial, but some authors suggest combination therapy in the most severe cases and persistent inflammation⁽⁴⁾. When properly treated, symptoms become temporary^(5,6). In the present report, com-

ination therapy with oral corticosteroids in anti-inflammatory dose was performed, which seemed to favor the improvement of ocular inflammation in a short period.

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