Case Report

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Acute syphilitic posterior placoid chorioretinopathy mimicking central serous chorioretinopathy: A case report

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Abstract:

A 51-year-old man had experienced declining visual acuity for 4 months. His best-corrected visual acuity was 20/40 in both eyes. Ophthalmoscopic examination showed a yellowish placoid lesion over the macular area, and spectral-domain optical coherence tomography (SD-OCT) revealed subretinal fluid accumulation in the left eye, which resembled that seen with central serous chorioretinopathy (CSCR). Three days later, fluorescein angiography (FA) revealed fluorescein leakage, and indocyanine green angiography (ICGA) showed hypofluorescence over the lesion. Persistent ellipsoid zone loss as spontaneously resolved subretinal fluid was noted at the same time with SD-OCT. Laboratory examination disclosed positive rapid plasma reagin and *Treponema pallidum* particle agglutination tests (titer >1:1280), which confirmed the diagnosis of ocular syphilis. Acute syphilitic posterior placoid chorioretinopathy (ASPPC) could mimic CSCR with spontaneously resolved subretinal fluid observed in SD-OCT images. The acute loss of the ellipsoid zone, mismatched results from SD-OCT and FA, and picture of retinitis can also provide hints for differentiating the two diseases.

Keywords:

Central serous chorioretinopathy, fluorescein angiography, ocular syphilis, spectral-domain optical coherence tomography

Introduction

Syphilis is a sexually transmitted infectious disease that is also called the "great imitator" because of the various manifestations of symptoms that mimic those of other diseases. It is a curable disease with early diagnosis and treatment; however, the variation in presentation can make the diagnosis challenging. Ophthalmologists play an important role in preventing vision loss, morbidity, and mortality in patients with this disease.[1] Here, we report mismatched retina images obtained from spectral-domain optical coherence tomography (SD-OCT) and angiography in a patient with acute syphilitic posterior placoid chorioretinopathy (ASPPC) whose initial SD-OCT images showed subretinal fluid that which resembled a symptom of central serous chorioretinopathy (CSCR).

Case Report

A 51-year-old man who denied systemic underlying disease presented with blurred vision in his left eye and central obscuration in his right eye for 4 months. His best-corrected visual acuity was 20/40 in both eyes. Ophthalmoscopic examination showed a yellowish placoid lesion and deposits over the macular area in the left eye [Figure 1a], and SD-OCT revealed accumulation of subretinal fluid in the left eye that resembled a symptom of CSCR [Figure 1b]. No treatment was given.

We performed fluorescein angiography (FA) and indocyanine green angiography (ICGA) 3 days later. The patient's best-corrected

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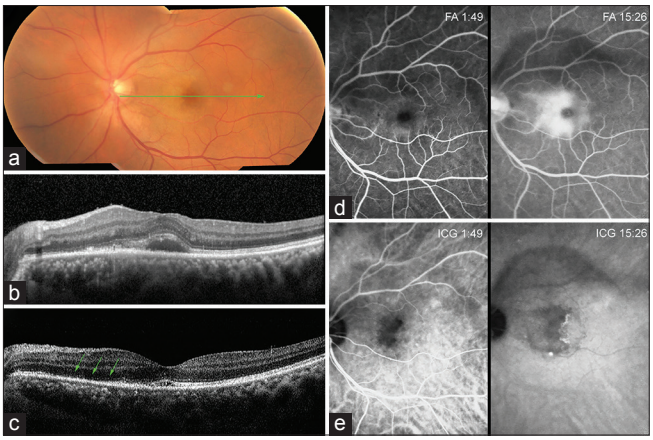

Figure 1: Retina pictures of the left eye. (a) Color fundus photography showed a yellowish placoid lesion over the macular area. (b) Spectral-domain optical coherence tomography revealed subretinal fluid accumulation, which resembled that of central serous chorioretinopathy. (c) Repeated spectral-domain optical coherence tomography taken at the same time demonstrated bilateral ellipsoid zone loss (arrows) without subretinal fluid. (d) Early and late fluorescein angiography revealed vitritis, vitreous opacity, mild retinal phlebitis, and increased hyperfluorescence in the macula area over the lesion, which indicated vascular leakage. (e) Indocyanine green angiography showed hypofluorescence over the lesions

visual acuity was 20/200 in both eyes. FA revealed vitreous opacity, mild retinal phlebitis, and hyperfluorescence in the macula area over the lesion, which indicated vascular leakage [Figure 1d]. ICGA showed hypofluorescence over the lesion [Figure 1e]. Repeated SD-OCT performed at the same time demonstrated ellipsoid zone loss [Figure 1c, arrows] with spontaneously resolved subretinal fluid accumulation. The FA and ICGA images as well as leakage found with FA but without fluid as seen with SD-OCT led us to suspect infectious disease as the cause.

Further laboratory work-up disclosed positive tests for rapid plasma reagin (titer 1:64) and *Treponema pallidum* particle agglutination (titer >1:1280) and no reactivity for the human immunodeficiency virus antigen and antibody combination test. Under the diagnosis of ASPPC, the patient received antibiotic treatment in the infectious ward of our hospital.

Discussion and Conclusions

Syphilis is a lethal chronic infectious disease that can be cured if recognized and treated early. Posterior uveitis is the most common ocular complication, and chorioretinitis is the most frequent posterior segment manifestation.[1] Acute syphilitic posterior placoid chorioretinitis was first described by Gass *et al*. as a large, yellowish, circular, or oval placoid lesion at the level of the retinal pigment epithelium (RPE) in or near the macular.[2] SD-OCT findings of acute syphilitic posterior placoid chorioretinitis have been recently reported and include a disrupted ellipsoid zone, small nodular elevation of the RPE layer, and accumulation of subretinal fluid.[3]

CSCR is a self-limiting disease, and subretinal fluid accumulation associated with CSCR usually resolves spontaneously within 2 or 3 months. However, the recurrence rate was estimated up to 31%.[4] When subretinal fluid is observed by SD-OCT, FA shows a typical "smokestack" or dotted image indicating leakage and dye pooling. ICGA may reveal hyperpermeability with dilated choroidal vessels.[5]

The initial SD-OCT in our patient showed subretinal fluid accumulation, which resembled that seen with CSCR. However, 3 days later, subsequent FA showed leakage, but SD-OCT showed resolution of the subretinal fluid accumulation. Subretinal fluid accumulation can presented in cases of ASPPC[3] and spontaneously resolved fluid accumulation can occur within these patients even without treatment.[6,7] Unlike CSCR, in which the ellipsoid zone recovers when subretinal fluid accumulation is resolved,[8] patients with ASPPC presented with ellipsoid zone loss and scattered RPE nodules after spontaneous subretinal fluid resolution.[3,9] FA applied to our patient's eyes also revealed vitreous opacity and retinal phlebitis, which suggested the involvement of inflammation or infectious disease instead of CSCR. In addition, the late-phase ICGA in our patient showed blocking of fluorescence, which differs from ICGA results observed in eyes with CSCR.

Syphilis can mimic a variety of diseases. We suggest that physicians should be aware of the possible presence of syphilis in patients whose eyes display leakage on FA at the same time as resolved subretinal fluid accumulation observed with SD-OCT. The signs of inflammation and infection on fundus could also arouse awareness of this diagnosis.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Nil.

Conflicts of interest

The authors declare that there are no conflicts of interests of this paper.

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