Retinochoroidal fold with severe disc edema in a case of posterior scleritis

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Key words: Disc edema, orbital pseudotumor, posterior scleritis, retinochoroidal folds

A 14-year-old male patient presented with acute-onset painful diminution of vision and redness in left eye for past 1 week. The left eye had visual acuity of 20/80, relative afferent papillary defect, some limitation of abduction, mild proptosis, diffuse conjunctival congestion, 2+ anterior chamber cells, few retrolental cells, severe disc edema [Fig. 1a], annular white peripapillary fold (likely sclerchoroidal infolding), and radiating peripapillary retinochoroidal folds [Fig. 1a]. The right eye examination was unremarkable. The possible differentials included posterior scleritis or orbital inflammatory pseudotumor.[1,2]

Ultrasonography (USG) B scan showed sclerochoroidal thickening at posterior pole and a positive “T” sign [Fig. 1b]. The architecture of posterior pole was distorted on swept source optical coherence tomography (SS-OCT, DRI, Triton, Topcon Inc.) [Fig. 1c]. Contrast-enhanced magnetic resonance imaging of orbit revealed posterior scleral thickening with postcontrast enhancement, normal extraocular muscles, and preserved fat planes. A diagnosis of left eye diffuse posterior scleritis with coexistent anterior uveitis was made.

After systemic evaluation, the patient was started on oral corticosteroids, topical steroids, and topical cycloplegic. At 1 week, visual acuity improved to 20/30. Disc edema and peripapillary retinochoroidal folds had nearly disappeared [Fig. 2a]. USG B scan showed a near-resolution of “T” sign [Fig. 2b]. SS-OCT showed a significant decrease in disc elevation [Fig. 2c]. Oral and topical steroids were gradually tapered over 6 weeks. At the last visit (2 months), corrected distance visual acuity (CDVA) was 20/20 in left eye with normal optic disc and peripapillary retina.

Posterior scleritis often presents with disc edema, circumferential choroidal folds, and retinal straie.[1,3,4] The present case was unusual as it had pathological disc elevation and marked annular tissue infolding around the disc. Therefore, it was imperative to rule out compressive intraorbital lesions with imaging. The involvement of extraocular muscles and fat planes was also not evident which ruled out any significant component of pseudotumor. Posterior scleritis needs urgent treatment with systemic steroids.[1,3] A rapid and thorough clinical examination and orbital imaging is therefore required in such cases to reach a diagnosis and start appropriate treatment.

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.

Financial support and sponsorship
Nil.

Conflicts of interest
There are no conflicts of interest.
Figure 1: Fundus imaging of a 14-year-old male patient with posterior scleritis in the left eye. (a) Color fundus photograph shows severe disc edema, circumferential white ring of tissue infolding (white arrowheads), radiating peripapillary retinochoroidal folds. (b) USG B scan shows increased ocular coat thickness at the posterior pole and a “T” sign (yellow arrows). (c) OCT radial line scan along the axis highlighted by the white arrow in the subfigure “a” shows elevated contour of the optic disc and peripapillary retina with retinal folds and obtunded foveal dip (white arrow). The arrowheads point to the sharp deflection of retinal pigment epithelium and correspond to the white ring seen in the color photograph.

Figure 2: Fundus imaging after 1 week course of systemic corticosteroids. (a) Color fundus photograph shows resolved disc edema and resolved peripapillary retinochoroidal folds. Few faint retinal striae could be seen at the macula. (b) USG B scan of the posterior segment shows decreased thickness of the ocular coats at the posterior pole, a near complete resolution of the episcleral fluid (yellow arrows), and restoration of the normal optic nerve shadow. (c) Swept source optical coherence tomography scan (radial) along the axis highlighted by the white arrow in the subfigure “a” shows decrease in the disc elevation and resolution of peripapillary retinal folds. The retinal architecture and foveal dip (white arrow) is restored.
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