Acute retinal pigment epithelitis: Optical coherence tomography-based diagnostic approach

Abhinav Dhami, Ravinder Kaur Malhi, Nimrata Bajaj Dhami, Gobinder Singh Dhami

Key words: Acute retinal pigment epithelitis, optical coherence tomography, white dot syndrome

A 37-year-old female presented with sudden diminution of vision for 4 days in the left eye with best-corrected vision of 20/200 on Snellen's chart. The anterior chamber and vitreous cavity showed no signs of inflammation. The right eye was unremarkable [Fig. 1a], and the left eye had presence of multiple yellowish pigmentary alteration [Fig. 1b – blue arrow] just inferior to fovea and healed chorioretinal atrophic patch (CRA) along superior arcade. Fundus fluorescein angiography showed an early hypofluorescence [Fig. 2a], with linear hyperfluorescence [Fig. 2b and c] just inferior to fovea with no leakage in the later phase and central hypofluorescence with marginal staining was noted along the CRA [Fig. 2d]. Optical coherence tomography (OCT) showed a dome-shaped hyperreflective lesion at fovea, at the level of photoreceptor outer segment layer disrupting the ellipsoid zone and interdigitation zone [Fig. 3a]. A working diagnosis of acute retinal pigmentary epithelitis (ARPE) was made and oral steroids (40 mg/day for weeks and tapered weekly) were started in view of foveal involvement. On subsequent follow-up, the retinal lesion showed resolution [Fig. 1c] and OCT [Fig. 3b and c] showed decrease in the height of hyperreflective lesion and restoration of the retinal layers in order from inner to outer layers, with a vision of 20/20 at final follow-up.

Discussion

The diagnosis of ARPE as described by Krill and Deutman depends on the presence of a characteristic fine pigment stippling in the macular area, at the level of the RPE, surrounded by yellow-white haloes of hypopigmentation.[1] OCT findings suggest that the initial lesion in ARPE is located at the level of the photoreceptor layer inner segment and outer segment (IS-OS) junction with a hyperreflective band.[2,3] It is mainly unilateral; however, bilateral cases have been reported. It is a self-limited disease and usually regresses spontaneously.[1] The diagnosis of ARPE can be challenging and can overlap with white dot syndrome and acute posterior multifocal placoid pigment epitheliopathy picture.[4] OCT helps in an early diagnosis and in understanding the healing at the level of RPE.

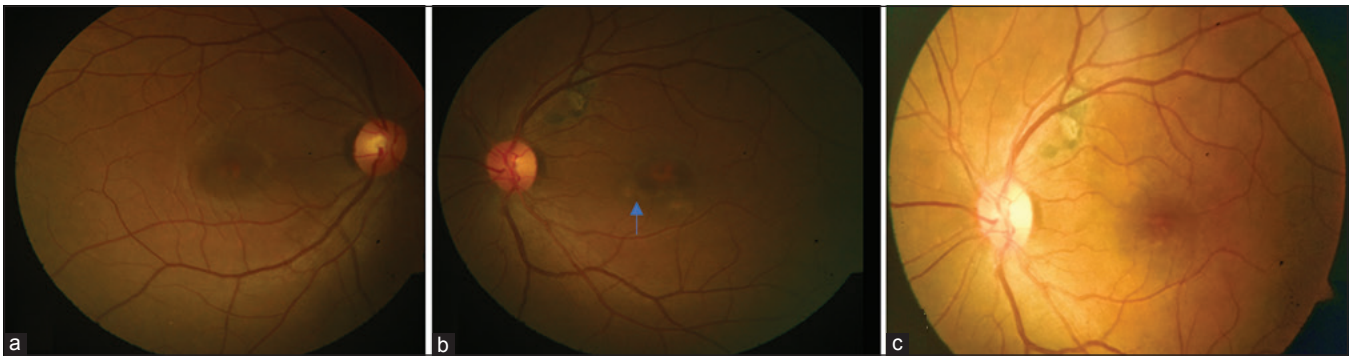

Figure 1: (a) Fundus photograph of the right eye, (b) fundus photograph of the left eye showing yellowish lesion just inferior to the fovea (blue arrow), with a superior healed chorioretinal atrophic scar, and (c) fundus image at 1 month showing resolution of yellowish lesions

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Department of Retina and Uvea, Dhami Eye Care Hospital, Ludhiana, Punjab, India

Correspondence to: Dr. Abhinav Dhami, Dhami Eye Care Hospital, 82-b Kitchlu Nagar, Ludhiana - 141 001, Punjab, India. E-mail: drabhinavdhami@gmail.com

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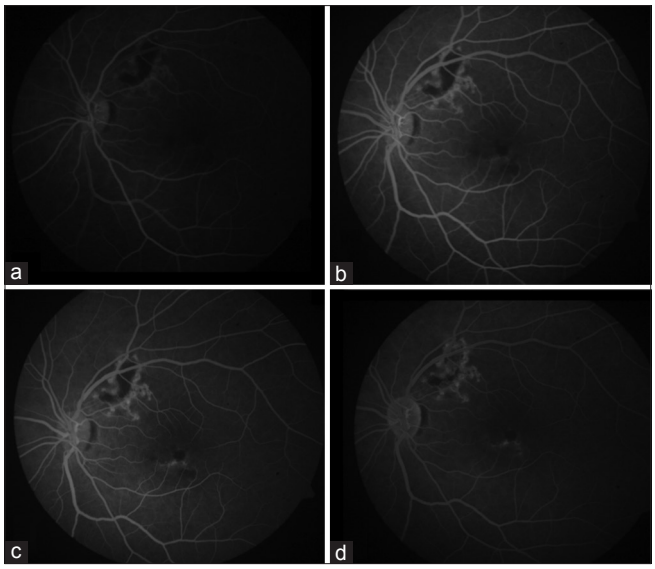

Figure 2: (a) Early AV phase with linear hyperfluoresence just inferior to fovea with superior CRA lesions showing central hypofluoresence and marginal staining, (b) Early AV phase with increase in intensity of linear hyperfluoresence with no leakage of the yellowish lesion with hypofluoresence just inferior to fovea. (c) Mid AV phase shows increase in intensity of linear hyperfluoresence with no leakage of the yellowish lesion with hypofluoresence just inferior to fovea.(d) Late-phase persistent staining of the yellowish lesion with hypofluoresence with no leakage

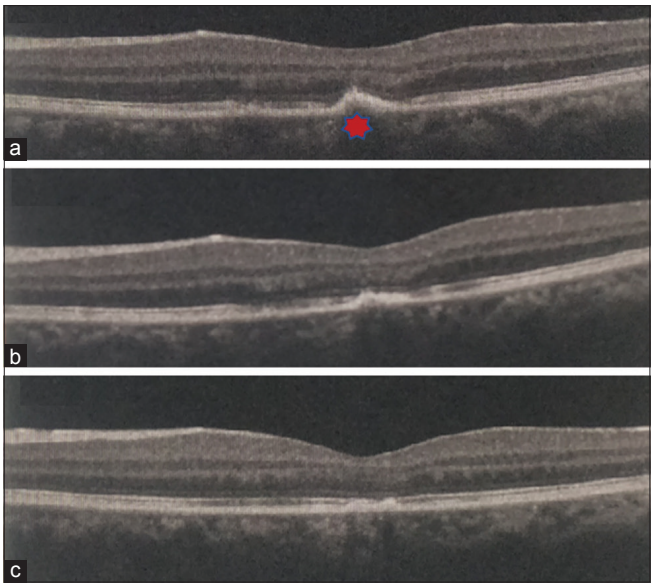

Figure 3: (a) Horizontal OCT scan shows a dome-shaped hyperreflective lesion at fovea (red asterix), at the level of retinal pigmentary epithelium. (b) Resolution in the height of the dome-shaped hyperreflective lesion at fovea at the pigmentary retinal epithelium. (c) At 1 month, OCT shows restoration of the outer retinal layers

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Conflicts of interest

There are no conflicts of interest.

References

1. Cho HJ, Han SY, Cho SW, Lee DW, Lee TG, Kim CG, *et al*. Acute retinal pigment epithelitis: Spectral-domain optical coherence tomography findings in 18 cases. Invest Ophthalmol Vis Sci 2014;55:3314-9.
2. Puche N, Offret O, Bernard JA, Behar-Cohen F. A case of acute retinal pigment epithelitis: Spectral domain optical coherence tomography time course and physiopathologic hypothesis. Clin Ophthalmol (Auckland, NZ) 2010;4:1029.
3. Cho HJ, Lee DW, Kim CG, Kim JW. Spectral domain optical coherence tomography findings in acute retinal pigment epithelitis. Can J Ophthalmol 2011;46:498-500.
4. Roy R, Saurabh K, Thomas NR. Multicolor imaging in a case of acute retinal pigment epithelitis. Retin Cases Brief Rep 2018; doi: 10.1097/ICB.0000000000000726.