

Panoramic optical coherence tomography angiography features in acute zonal occult outer retinopathy

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AZOOR (acute zonal occult outer retinopathy) is a rare retinal disorder presenting with sudden onset scotoma and photopsia.^[1] The pathognomic feature for diagnosing AZOOR is the presence of “trizonal pattern” on fundus autofluorescence (FAF).^[2] We present a 36-year-old male complained of scotoma and photopsia since 1 month in both eyes, more predominantly in left eye. On examination, best-corrected visual acuity was 20/20 OU (both eyes). Dilated fundus examination OU showed orange-yellow-colored demarcation line in the peripapillary area [Fig. 1a]. FAF imaging OU revealed corresponding abnormal area of speckled hyperautofluorescence around an area of hypoautofluorescence in the peripapillary area [Fig. 1b]. Spectral domain optical

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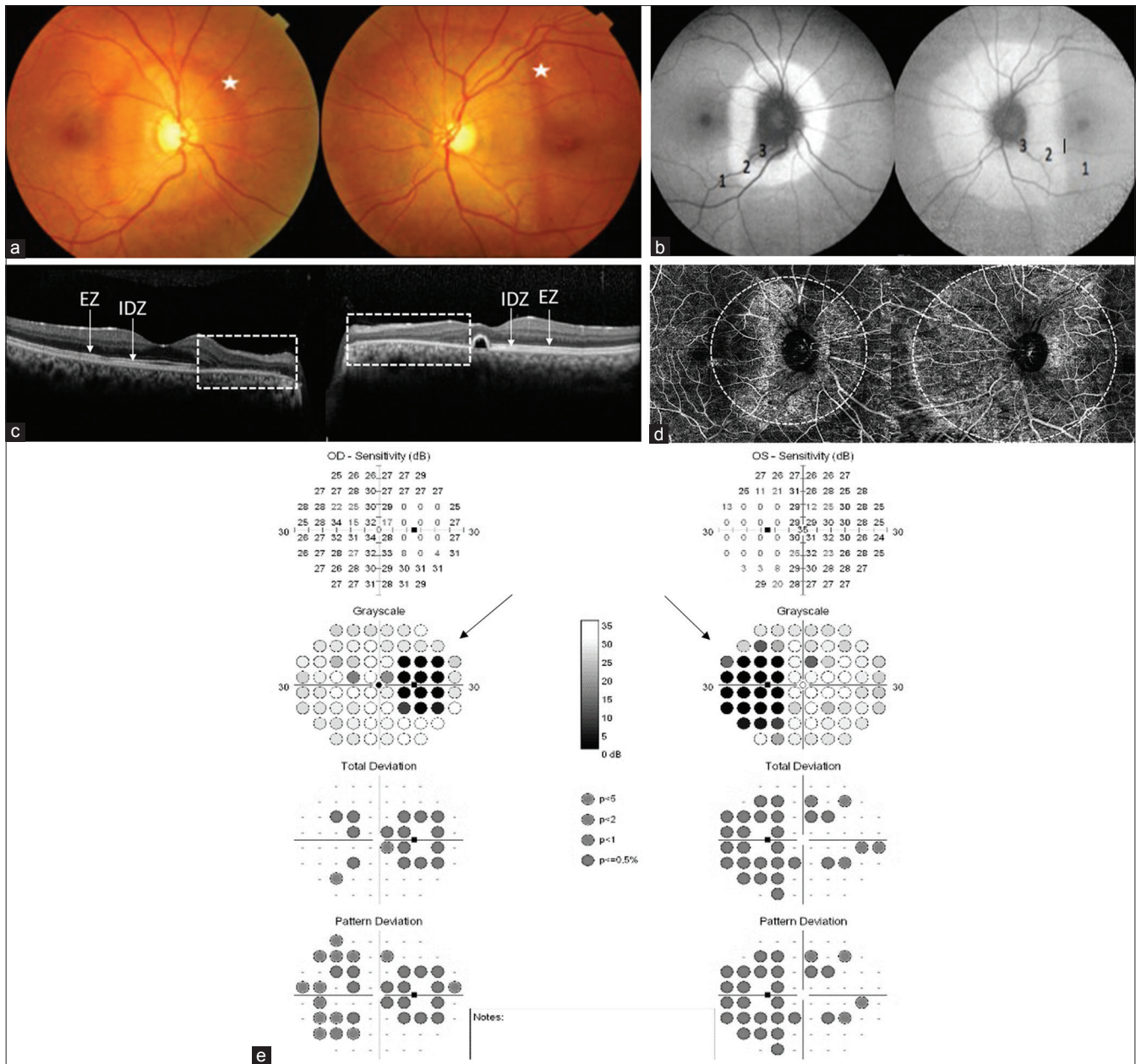


Figure 1: (a) Color fundus photograph OU showing orange-yellow colored demarcation zone in the peripapillary area bordering affected and unaffected retina. (b) Fundus autofluorescence image OU showing typical characteristic trizonal pattern of involvement OD acute zonal occult outer retinopathy lesion: Zone 1 is characterized by presence of normal autofluorescence in the area outside the demarcation line, zone 2 by speckled hyperautofluorescence within the acute zonal occult outer retinopathy lesion, and zone 3 by hypoautofluorescence corresponding to the development of choroidal atrophy. (c) Optical coherence tomography scan OU passing through macula shows that the integrity of the external limiting membrane, ellipsoid zone, and interdigitation zone is disrupted corresponding to area demarcated in red free and fundus autofluorescence images. (d) Optical coherence tomography angiography 12 × 9 panorama OU shows increased decorrelation signal at the deeper capillary plexus along with projection artifacts of the superficial capillary plexus. (e) Visual field examination revealed enlarged blind spot OU

coherence tomography [Fig. 1c] showed disruption of ellipsoid zone nasal to fovea in OU and a small pigment epithelial detachment subfoveally in OS. Optical coherence tomography angiography panorama (OCTA-P) images were obtained on the RS-3000 Advance OCT (Nidek, Japan) covering an area of 12 × 9 mm equivalent to 40° × 30° field of view [Fig. 1d], which revealed at the watershed zone that there is increased decorrelation signal and it is more prominently seen at the level of avascular zone of retina along with the projection artifacts

of the superficial blood vessels that are encroaching on this level. Visual field examination [Fig. 1e] revealed enlarged blind spot OU more in OS.

OCT angiography (OCTA) is a functional extension of OCT that works on the principle of decorrelation.^[3] Few studies have described the role of multimodal imaging in AZOOR.^[4,5] But to the best of our knowledge, this is the first time in the literature that OCTA-P features of AZOOR are shown. OCTA panorama centered on fovea with wider field of view can prove as a

potential imaging marker and can subserve as an additional tool to FAF to accurately diagnose and manage AZOOR.

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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Conflicts of interest

There are no conflicts of interest.

References

1. Gass JD, Agarwal A, Scott IU. Acute zonal occult outer retinopathy: A long-term follow-up study. *Am J Ophthalmol* 2002;134:329-39.
2. Tavallali A, Yannuzzi LA. Acute zonal occult outer retinopathy; revisited. *J Ophthalmic Vis Res* 2015;10:211-3.
3. Nagpal M, Juneja R. Panoramic imaging with OCTA. *Retina Today* 2017;4:48-52.
4. Mrejen S, Khan S, Gallego-Pinazo R, Jampol LM, Yannuzzi LA. Acute zonal occult outer retinopathy: A classification based on multimodal imaging. *JAMA Ophthalmol* 2014; 132:1089-98.
5. Duncker T, Lee W, Jiang F, Ramachandran R, Hood DC, Tsang SH, *et al.* Acute zonal occult outer retinopathy: Structural and functional analysis across the transition zone between healthy and diseased retina. *Retina* 2018;38:118-27.