Sir,

**Retinal pigment epithelium disturbances in acute posterior multifocal placoid pigment epitheliopathy**

Acute posterior multifocal placoid pigment epitheliopathy (APMPPE) is a presumed inflammatory condition of the posterior pole in which the primary site of involvement is postulated to be either the retinal pigmented epithelium or the choriocapillaris. We describe a case of APMPPE with high-resolution SD-OCT imaging that localises changes to the retinal pigment epithelium and outer retinal layers.

***Case report***

A 35-year-old man presented with decreased vision in the left eye for 3 days. He was healthy until 2 months before presentation when he was admitted to the hospital with cough and fever. The chest CT revealed bilateral lung nodules and hilar adenopathy.

On examination, the best-corrected vision was 20/20 OD, 20/200 OS. The pupils were normal OU. Goldmann applanation tonometry measured 14 mm Hg OD and 15 mm Hg OS. Slit lamp examination revealed 4+ anterior vitreous cell OS.

Dilated fundus examination revealed multiple cream-coloured lesions in the macula OS (Figure 1a). Similar findings to a lesser extent were noticed in the right eye as well. There was mild vitritis OS. Fluorescein angiography of the left eye showed early hypo-fluorescence and late hyper-fluorescence in the area of the lesions (Figure 1b and c). Time domain ocular coherence tomography (TD-OCT) revealed an increased reflectivity at the level of the retinal pigment epithelium (RPE).

SD-OCT revealed an increased reflectivity and elevation and disturbance of the RPE contour, disorganisation of photoreceptor outer segments, and loss of the IS/OS line (Figure 2). These changes correspond in location to the active lesions on FA. Several months later, the patient's vision OS was 20/25. Fundus examination revealed a resolution of the macular lesions with residual atrophic-pigment epithelium changes. SD-OCT revealed decreased disturbance of the RPE, improvement of the photoreceptor outer segments, and restoration of the IS/OS line (Figure 3).

**Discussion**

Described by Gass in 1968, acute posterior multifocal placoid pigment epitheliopathy (APMPPE) is a condition characterized by bilateral multiple grey-white subretinal lesions in young female patients.[1] Gass postulated the level of involvement to be at the RPE.[1,2] Others proposed that APMPPE is a delayed hypersensitivity reaction causing obstruction of the precapillary arterioles of the choriocapillaris.[3] The controversy of the primary site of involvement is not resolved with TD-OCT.[4,5]

SD-OCT allows for higher-resolution imaging of retinal conditions. Findings in our patient suggest a primary retinal pigment epitheliitis, with additional histological alterations in the outer retinal layers. Disturbance of the IS/OS line suggests secondary inflammatory or ischaemic change to outer retinal layers. Restoration of the line with disease quiescence correlated with

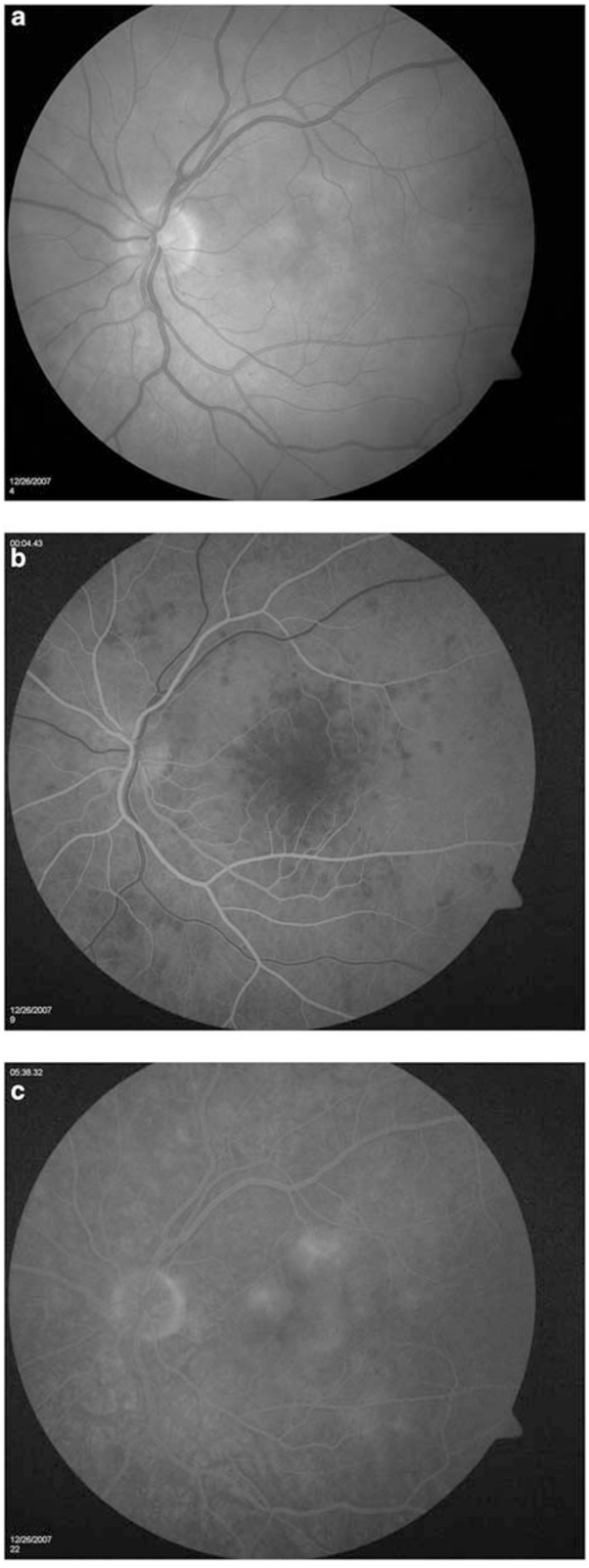


**Figure 1** Multiple deep yellowish placoid fundus lesions in the left eye (a) are hypoflourescent on early frames the fluorescein angiogram (b), and hyperfluorescent on late frames (c).

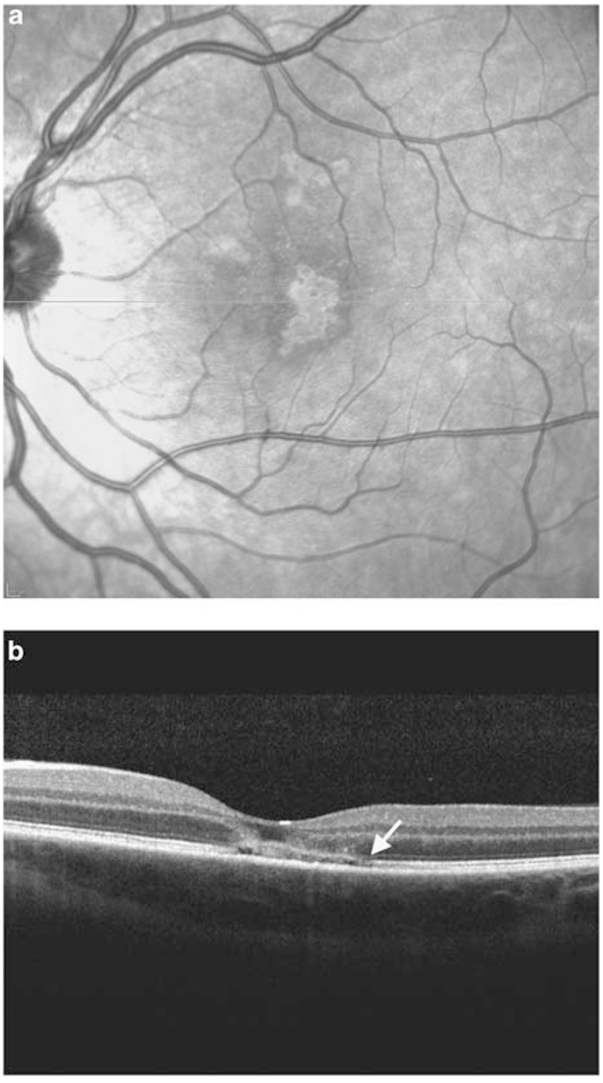


**Figure 2** (a) Fundus view left eye. (b) Line scan through the fovea shows elevation and irregularity of the RPE line, disorganisation of photoreceptor outer segments, and loss of the IS/OS line (arrow).

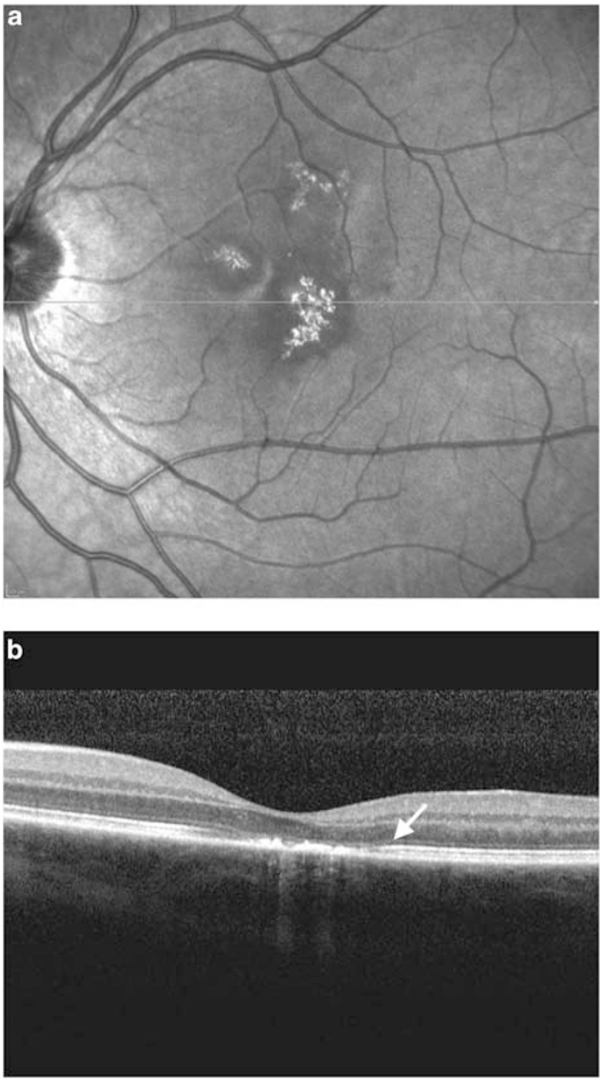


**Figure 3** (a) Fundus view after disease quiescence. (b) Line scan shows mild RPE irregularity with marked improvement in the foveal architecture and restoration of the IS/OS line (arrow).

improvement of vision, consistent with the previous reports of IS/OS alterations in other disease processes.

## Conflict of interest

The authors declare no conflict of interest

## Acknowledgements

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