Flat foveal contour simulating macular hole

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DESCRIPTION

A 40-year-old healthy female was referred for macular hole in his both eyes detected during routine examination. Visual acuity was 20/20 OU unaided. Ocular examination of OD was unremarkable except for the presence of round red lesion at fovea (figure 1A, arrow) that was more prominent on green reflectance imaging (figure 1B, arrow). Spectral-domain optical coherence tomography showed a flattened foveal contour (figure 1C, arrows), which explained the appearance of macular hole. Similar findings were seen in OS. There were no ocular or systemic features suggestive of albinism.

The foveal contour and anatomy may vary in different individuals. In a study of normal foveal contour and thickness by Tick *et al*, the foveal thickness was least in the eyes where inner nuclear layer was not continuous over the fovea.[1] These eyes had flat foveal pit and was seen in 7.3% of the cases. The presence of flat foveal pit in conjunction with thinner retina at fovea allows better appreciation of choroidal red reflex in a small circular area that can simulate a lamellar or full thickness macular hole. These images emphasises that flat foveal contour can simulate macular hole and that optical coherence tomography is useful in differentiating flat foveal contour from macular hole.

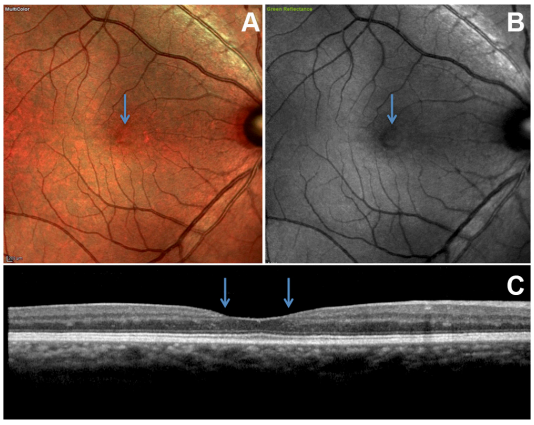

Figure 1 Multicolour scanning laser image of right eye showing small red lesion (arrow) simulating macular hole (A) that is better seen on red free image (B). Apparent macular hole corresponds to flat foveal contour on optical coherence tomography (C).

Learning points

- Foveal contour may vary in normal population.
- Flat foveal contour may simulate a macular hole.
- Optical coherence tomography is a useful tool to differentiate macular hole from flat foveal contour.

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Patient consent Obtained.

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REFERENCE

1 Tick S, Rossant F, Ghorbel I, *et al*. Foveal shape and structure in a normal population. *Invest Ophthalmol Vis Sci* 2011;52:5105–10.

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