


Utility of narrow band raster scan for detection of occult disc pit

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DESCRIPTION

A young female patient in her early 30s presented with a circumscribed hypopigmented macular lesion and hyperpigmented foveal scar in the right eye (OD) (figure 1A) better appreciated on fundus autofluorescence (figure 1B). She had been referred with a diagnosis of cystoid macular oedema OD and had received posterior subtenon injection of triamcinolone from another eye centre but with no visual improvement. The well-defined circumscribed morphology of the macular lesion raised a strong clinical suspicion of it being a sequela of optic disc pit maculopathy. However, repeated and careful examination of the fundus images, including a 30° image of the optic disc (obtained using the Zeiss 450 plus fundus camera) did not reveal an optic disc pit (figure 1C). Initial spectral-domain optical coherence tomography (OCT) through the optic nerve head (ONH) using 48 radial scan (Spectralis by Heidelberg) also failed to reveal the optic pit and depicted only a few cavitations along temporal slope of ONH (figure 2A,B). Owing to the strong suspicion, a repeat OCT scan, this time in the raster mode with 0.5 mm separation between the scanning lines, was undertaken. It was only after this that a breach in the membrane over ONH was revealed, confirming the presence of occult disc pit (figure 2C,D).

The minimal separation that can be obtained using the radial scan with the Spectralis OCT is 7.5° (with 48 radial lines) and as seen in our patient, it is possible to overlook small lesions with this degree of separation. Hence, we herein highlight that a dense raster scan through the optic disc has a higher potential of

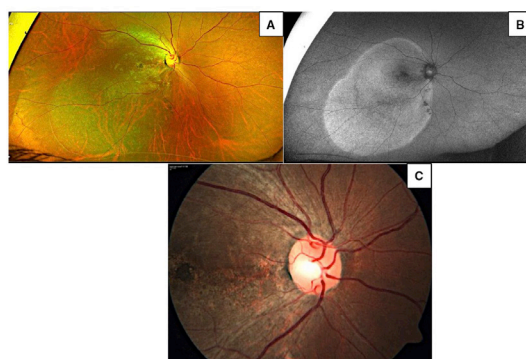


Figure 1 Ultra-wide field image of right eye depicting a circumscribed hypopigmented macular lesion extending beyond the inferotemporal arcade with a foveal hyperpigmented scar (A) better appreciated on fundus autofluorescence (B). Magnified higher resolution image of the optic disc appears normal without any clinically evident disc pit (C).

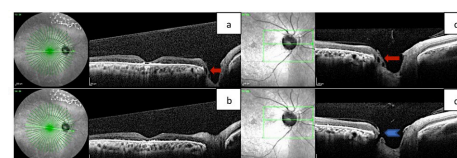


Figure 2 (A) Radial scan optical coherence tomography (OCT) through the optic nerve head (ONH) showing cavitations along the temporal slope of ONH (red arrow). (B) Radial scan line 7.5° apart does not show any abnormality in the ONH. Raster scan OCT through the ONH depicting not only the cavitations along the slope of ONH (C; red arrow) but a breach in the membrane of the ONH (D; blue arrowhead) thus confirming the presence of occult disc pit.

identifying the lesion and must be employed in all cases with high suspicion of occult disc pit. Circular OCT scan centred on the optic disc is also a sensitive method of detecting occult disc pit. It can detect marked reduction in the retinal nerve fibre layer thickness consistent with the location of the optic pit.¹

Learning points

- ▶ A suspicion of occult disc pit should be raised with the presence of circumscribed macular lesion with a peripapillary extension.
- ▶ A dense raster optical coherence tomography scan is a better investigative parameter than a radial scan to detect occult disc pit.
- ▶ Optic disc pit is a rare entity, and occult disc pit is rarer, making it difficult to diagnose.

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Case reports provide a valuable learning resource for the scientific community and can indicate areas of interest for future research. They should not be used in isolation to guide treatment choices or public health policy.

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reduced retinal nerve fibre thickness at the papillomacular bundle. *Br J Ophthalmol* 2003;87:1300–1.

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