

Fig. 2—Microscopic examination of the eyelid specimen showed numerous mononuclear cells, including large cells with round, vesiculated nuclei and prominent nucleoli (H&E,  $\times 100$ ) (A). Higher magnification of the specimen (H&E,  $\times 200$ ) (B). Immunohistochemical stains were positive for CD20 (peroxidase antiperoxidase,  $\times 250$ ) (C). Immunohistochemical stains were positive for Ki-67 in the neoplastic cells (avidin-biotin-peroxidase complex immunohistochemical technique,  $\times 100$ ) (D).

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### A case of multiple focal choroidal excavations

Focal choroidal excavation was first described by Jampol et al.<sup>1</sup> in 2006 under the name choroidal excavation. Since that time, a total of 16 cases have been reported, most recently under the label of focal choroidal excavation (FCE).<sup>1-4</sup> In all instances, optical coherence tomography (OCT) has demonstrated 1 or more focal areas of choroidal depression without any evidence of scleral ectasia or staphyloma. The retina is found either to conform to the path of the choroid or to maintain its normal course and remain separated from the choroid by a hyporeflective area. In this article, we report the first instance of an FCE having both a conforming and a nonconforming retina in the same eye, as well as a case with the highest total number of excavations, at 4.

A healthy 27-year-old female of Chinese descent with no significant ocular history presented with metamorphopsia and decreased vision in the right eye. Best corrected visual acuity was 20/25 in the right eye and 20/20 in the left, with respective refractive errors of  $-2.50$  D and  $-2.00$  D. Anterior segment examination was unremarkable. Of note, the OD macula had subtle changes in the retinal pigment epithelium. Corresponding hyperfluorescent window defects were observed on fluorescein angiography. On spectral domain OCT, 4 discrete areas of FCE were evident—2 conforming and 2 nonconforming. The inner segment/outer segment junction appeared to be somewhat attenuated at each FCE. Of interest, on 2 OCT cuts (Fig. 1, G, H) there appeared to be thickening of the outer plexiform layer. At 8-month follow-up, there was increased separation between the inner segment/outer segment line and the

Fig. 1—A healthy 27-year-old female of Chinese descent presented with metamorphopsia and slightly decreased vision in the right eye. The colour fundus photograph of the right eye (a) demonstrates subtle pigmentary changes in the macula, while the left eye (b) appears normal. A red-free image of the right eye (c) highlights the changes in the retinal pigment epithelium, and fluorescein angiography (d) demonstrates subtle hyperfluorescent areas in the macula, corresponding to window defects. Both conforming and nonconforming FCEs (e and f, respectively) are evident on spectral domain optical coherence tomography imaging. Apparent thickening of the outer plexiform layer is seen in the cuts shown in g and h. FCE, focal choroidal excavation.

retinal pigment epithelium in the 2 nonconforming lesions. No case of conforming FCE converting to nonconforming FCE has been documented, so long-term follow-up is needed to determine whether this is the natural progression of the disease.

A review of patient characteristics from the literature reveals certain trends (Table 1). Including our case, the majority are young (mean 41 years old); myopic (76%); female (76%); and with unilateral involvement (94%). There does seem to be a preponderance of Asian patients (53%). Recognizing an obvious selection bias, we found that most patients are symptomatic (65%), with either decreased vision or metamorphopsia. Pigmentary changes have been observed in all eyes.

As demonstrated in cases reported by Margolis et al.<sup>2</sup> and Abe et al.,<sup>3</sup> vision may be significantly affected in this condition. One patient detailed by Margolis et al. had a history of central serous retinopathy and developed a choroidal neovascular membrane. The group notes that the

**Table 1—Patient characteristics in 17 cases of focal choroidal excavation**

| Characteristics             |             |
|-----------------------------|-------------|
| Mean age in years (range)   | 41 (22–62)  |
| Female sex (%)              | 13 (76)     |
| Unilateral presentation (%) | 16 (94)     |
| Conforming FCE (%)*         | 11/24 (46)* |
| Race (%)                    |             |
| White                       | 6 (35)      |
| Asian                       | 9 (53)      |
| Black                       | 1 (6)       |
| Hispanic                    | 1 (6)       |
| Symptomatic                 | 11 (65)     |
| Myopia                      | 13 (76)     |

FCE, focal choroidal excavation.

\*Three eyes have been reported to have 2 FCE lesions (1 patient was affected bilaterally), and 1 (our case) had 4 lesions. Thus, 24 total lesions have been reported in 18 eyes of 17 patients.

choroid in patients with FCE, as in those with central serous retinopathy, appears to be thickened. One would typically expect myopic individuals to have a thinner choroid, so perhaps this relates to the pathophysiology of the disease or, alternatively, may be a consequence of it.

Although the etiology of FCE is still unknown, in all likelihood it may represent a congenital malformation. As more cases of this interesting condition are reported, we will develop a better understanding of its causes and evolution.

**John C. Chen, R. Rishi Gupta**

Department of Ophthalmology, McGill University, Montreal, Que.

Correspondence to:

John C. Chen, MD: john.chen@mcgill.ca

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**Cotrimoxazole-resistant *Nocardia* sclerokeratitis: effective therapy with fourth-generation fluoroquinolones**

Keratitis caused by *Nocardia* species makes up merely 1.42%-1.7% of all microbial keratitis.<sup>1</sup> *Nocardia* sclerokeratitis, though a rare complication, is usually successfully treated by systemic cotrimoxazole therapy.<sup>2</sup>

We report a rare case of cotrimoxazole-resistant *Nocardia* sclerokeratitis with a unique plaque-like presentation that was successfully treated with amikacin and fourth-generation fluoroquinolones.

A 70-year-old woman presented with decreased vision and mild pain in the left eye for 2 months. She denied history of trauma or use of medication. Her right eye was normal. Her vision was perception of light in the left eye.

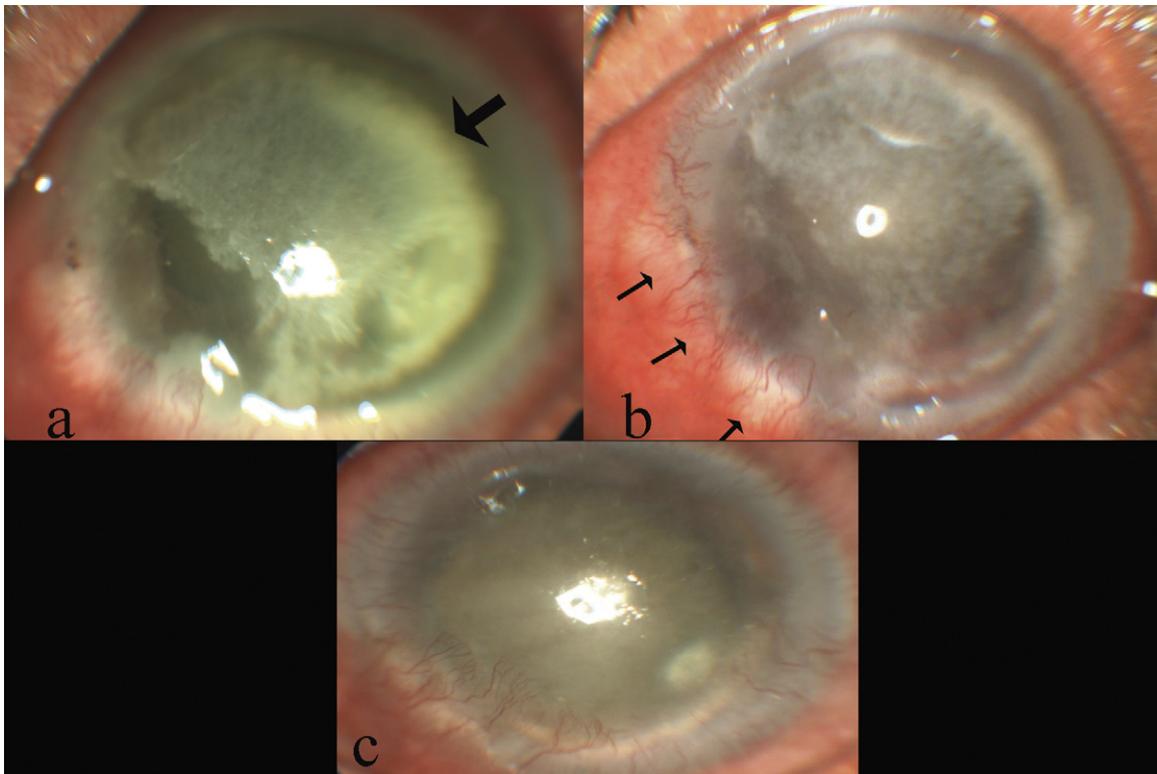


Fig. 1—Clinical photograph of the left eye showing a plaque-like infiltrate (black arrow) measuring 8 × 7.5 mm with greater density supero temporally and feathery margins inferonasally, with thickening at the limbus from 5 to 9 o'clock (a). Clinical photograph of the left eye showing prominence of 3 scleral nodules (black arrows) with patchy and less dense infiltrate with superficial vascularization (b). Clinical photograph of the left eye showing a vascularized corneal scar with resolved sclera lesions (c).