

## An unusual corneal limbal foreign body: Ostracoda shell

A 7-year-old boy was referred by the emergency department for a corneal limbal foreign body in his right eye. The patient's parents had first noted the lesion 3 days earlier, after he had been swimming in Lake Manitoba while on vacation. He was asymptomatic other than some mild ocular irritation. The ocular and medical histories were unremarkable.

On examination, the visual acuity was 20/25 OD and 20/20 OS. Slit-lamp biomicroscopy revealed a smooth, brown-black, semitransparent, dome-shaped foreign body measuring  $2.5 \times 0.7$  mm superficially embedded in the inferotemporal corneal limbus OD (Fig. 1). The surrounding conjunctiva was injected. Trace fluorescein uptake was noted around the lesion. The remainder of the ocular examination was unremarkable.

Because of limited patient cooperation, removal of the lesion under slit-lamp visualization was unsuccessful. Under general anesthesia, the lesion was found to be firmly adherent to the underlying cornea. The lesion was suspected to be biologic in origin, so hypertonic (5% NaCl) saline solution was applied to the cornea. The foreign body was then readily removed, leaving only a small epithelial defect. Three days later, the signs and symptoms had resolved completely, and the visual acuity was 20/20 OU.

Histopathologic examination of the formalin-fixed, paraffin-embedded specimen disclosed an intact pigmented, birefringent, acellular shell with a hollow core containing scattered, predominantly acute inflammatory cells, some of which were adherent to its outer surface (Fig. 2). Further analysis of the specimen by a biologist (LG) at the University of Manitoba revealed it to be the shell of an Ostracoda of either the Darwinulidae or the Cypridae family, both of which inhabit Lake Manitoba.

The Ostracoda are a class of the Crustacea ranging in size from 0.2 to 30 millimeters.<sup>1</sup> They inhabit virtually all aquatic habitats, with some species living terrestrially in moss.<sup>2</sup> Their

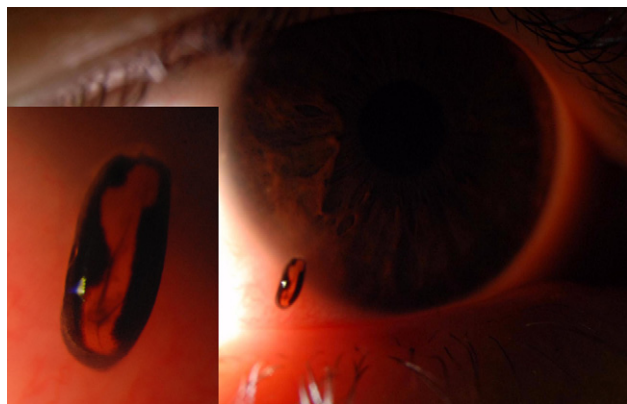


Fig. 1—View of anterior segment of corneal foreign body, which was firmly adherent to the limbal region of the right eye. Magnified view of corneal foreign body, an Ostracoda shell (inset).

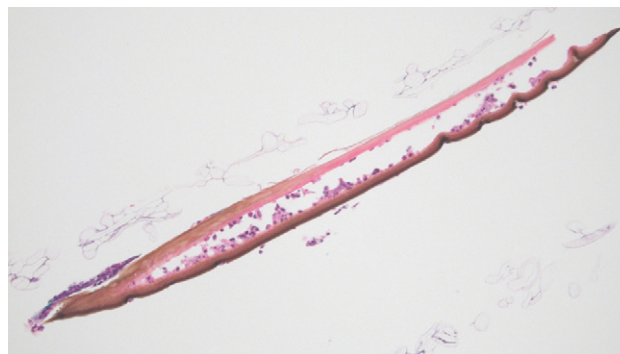


Fig. 2—Histopathologic examination disclosed an intact pigmented, birefringent, acellular shell with a hollow core containing several predominantly acute inflammatory cells, some of which were adherent to its outer surface (hematoxylin and eosin,  $\times 200$ ).

bodies are laterally compressed and completely enclosed in a bivalved carapace, or shell, composed primarily of chitin.<sup>3</sup> These shells can be strongly resistant to decomposition after the organism dies. The acquisition of this lesion in our patient most likely represents simple contamination after swimming in lake water.

Ostracoda should be considered in patients presenting with corneal foreign bodies after swimming, as occurred with our patient. To the best of our knowledge, this is the first report of an Ostracoda shell appearing as a corneal foreign body. However, other freshwater organisms such as leeches have rarely been reported as corneal foreign bodies.<sup>4</sup> Such foreign bodies located along the corneal limbus in a child may simulate prolapsed uveal tissue, therefore detailed ocular examination is important to rule out occult trauma.

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