

Oxybuprocaine

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First report of ultrastructural changes to the corneal endothelium: case report

A case has been reported from Saudi Arabia which the authors believe is the first to document ultrastructural changes to the corneal endothelium following the use of oxybuprocaine.

A 40-year-old man self-administered topical oxybuprocaine up to 12 times/day for 7 days after he sustained bilateral ultraviolet light keratitis. On ocular examination, the patient had chronic bilateral epithelial defects with diffuse stromal infiltration and oedema.

He was treated with bandage soft contact lenses and topical cycloplegia. Some improvement occurred but keratopathy and corneal scarring developed as the eyes healed over the following months. A penetrating keratoplasty was performed 20 months after the initial injury.

Histopathologically, the corneal stroma was shown to be markedly thinned. Electron microscopic examination of the cornea revealed variable shapes and sizes in the endothelial cells with clusters of necrotic cells. Notably, microfilamentous processes emanating from enlarged intercellular spaces were observed and apical cell attachments were found to be attenuated or absent

Risco JM, et al. Ultrastructural alterations in the endothelium in a patient with topical anesthetic abuse keratopathy. *Ophthalmology* 99: 628-633, Apr 1992 - Saudi Arabia

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