Corneal Injury Secondary to Accidental Surgilube Exposure

Surgilube (Fougera, Melville, New York) is a common general-use lubricant found in health care settings. One container in which it is packaged is a small tube that can look similar to many ophthalmic ointments. Herein, we report 2 cases of ocular injury related to Surgilube exposure.

Report of Cases. Case 1. A 30-year-old man underwent an orbital fracture repair for limited ocular motility. During the surgery, Surgilube was accidentally placed under a cornea shield on the left eye instead of Lacri-Lube (Allergan, Inc, Irvine, California). The cornea shield was removed at the conclusion of the 2-hour orbital repair.

The left cornea appeared cloudy, and the eye was immediately irrigated with 2 L of normal saline. The limbus was injected 360° with no areas of ischemia. The cornea was diffusely hazy with a 4 × 5-mm epithelial defect. The patient was treated with erythromycin ointment and atropine sulfate topically as well as doxycycline hyclate and vitamin C orally.

The next day, the cornea had a large epithelial defect with a small rim of epithelium circumferentially at the limbus (Figure). The cornea was clear. Treatment with tobramycin and dexamethasone ointment (Tobradex) was started once at bedtime. The epithelial defect continued to slowly improve during the next 10 days. The epithelial defect resolved, and the patient’s visual acuity improved to 20/20. He did develop an area of haze inferior to the visual axis. He did not report eye irritation.

Case 2. A 46-year-old woman underwent a bilateral upper and lower blepharoplasty in which corneal protectors were used. Surgilube was mistaken for Lacri-Lube. At the end of the case, the corneas were opacified and she was sent for an immediate ophthalmic evaluation.

She was found to have 80% to 90% epithelial defects in both eyes. Treatments with topical antibiotics, steroids, and artificial tears were started. The epithelial defects healed during the next 12 to 13 days. While her final best-corrected visual acuity was 20/20 OD and 20/25 OS, the patient was left with chronic photophobia, foreign-body sensation, and dry eyes. She was weaned off the steroids and antibiotics. Restasis and artificial tears were used to manage her dry eyes in the long term.

Comment. In our case reports, we have shown that use of Surgilube on the ocular surface can lead to slowly resolving epithelial defects and chronic irritation. The most likely ingredient in Surgilube to cause these toxic effects is chlorhexidine gluconate. The use of chlorhexidine gluconate on the cornea is known to have toxic effects. While Surgilube contains 20% chlorhexidine gluconate, another product, Hibiclens (Mölnlycke Health Care, Gothenburg, Sweden), contains 4% chlorhexidine gluconate but causes more severe damage such as corneal edema, endothelial cell loss, and bullous keratopathy. The difference in severity may be due to

Figure. Left eye on postoperative day 1 with fluorescein stain. Note the large corneal epithelial defect with a small rim of epithelium near the limbus.
Conjunctival Squamous Cell Carcinoma Harboring Leishmania Amastigotes in a Human Immunodeficiency Virus–Positive Patient

Leishmaniasis, a protozoal infection transmitted via the sand fly bite, is endemic to India, the Middle East, and Africa and is periodically found in Central and South America. Visceral leishmaniasis, also known as kala-azar, black fever, or Dumdum fever, is the most severe form. Ocular involvement occurs more frequently in cutaneous than in mucocutaneous and visceral manifestations. We report a unique case of Leishmania donovani chagasi identified by biopsy of squamous cell carcinoma (SCC) of the bulbar conjunctiva in a human immunodeficiency virus (HIV)–positive Hispanic man. Subsequent evaluation revealed kala-azar with histopathological confirmation of the organism in conjunctiva, lacrimal gland, and liver specimens.

Figure 1. Clinical photograph and photomicrographs. A, Right conjunctival mass, with a yellow gelatinous temporal lesion extending from the 9-o'clock position to the 12-o'clock position with associated symblepharon and feeder vessels. B, Invasive squamous cell carcinoma, moderately differentiated (hematoxylin-eosin, original magnification ×400). C, Conjunctival squamous cell carcinoma and Leishmania amastigotes in histiocytes (hematoxylin-eosin, original magnification ×1000). D, CD68-positive histiocytes containing organisms (immunoperoxidase reaction, original magnification ×1000).

Topical use of chlorhexidine gluconate (0.02%) is safe for use in the eye and not to use medications that do not have this designation. Although the patients in our case reports regained good vision, one patient was left with corneal haze and the other with chronic dry eye irritation. Due to the slow reepithelialization of the cornea, infectious keratitis and loss of visual acuity are possible.

Surgilube being water based and Hibiclens being a detergent. The detergent may enable the toxin to penetrate deeper into the cornea.

We believe that these are the first reported cases of Surgilube use on the ocular surface. Because of the common use of Surgilube in the hospital setting and the similar appearance to certain ocular medications, it is unlikely that this is the first actual time its mistaken use has occurred. It is important to correctly identify any medication being used on the ocular surface. It is also important to identify which medications are safe for use in the eye and not to use medications that do not have this designation. Although the patients in our case reports regained good vision, one patient was left with corneal haze and the other with chronic dry eye irritation. Due to the slow reepithelialization of the cornea, infectious keratitis and loss of visual acuity are possible.

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Financial Disclosure: None reported.

1. Murthy S, Hawksworth NR, Cree I. Progressive ulcerative keratitis related to the use of topical chlorhexidine gluconate (0.02%). Cornea. 2002;21(2):237-239.