

pecially when letter scores or logMAR values are provided.

Mariana S. Lopes, MD
Shiri Zayit-Soudry, MD
Ala Moshiri, MD, PhD
Susan B. Bressler, MD
Neil M. Bressler, MD

Author Affiliations: Universidade Nove de Julho, São Paulo, Brazil (Dr Lopes); and Retina Division, Wilmer Eye Institute, Johns Hopkins University School of Medicine and Hospital, Baltimore, Maryland (Drs Zayit-Soudry, Moshiri, S. B. Bressler, and N. M. Bressler).

Correspondence: Dr N. M. Bressler, Wilmer Eye Institute, Maumenee 752, Johns Hopkins Hospital, 600 N Wolfe St, Baltimore, MD 21287-9227 (nmboffice@jhmi.edu).

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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.



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.

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.¹ 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.²⁻⁵ The difference in severity may be due to

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.

William I. Sawyer, DO
Kristen Burwick, MD
Jennifer Jaworski, MD
Jonathan Yang, MD
Thomas F. Mauger, MD

Author Affiliations: Department of Ophthalmology, Haver Eye Institute (Drs Sawyer, Burwick, Jaworski, and Mauger) and Department of Plastic Surgery (Dr Yang), The Ohio State University, Columbus. Dr Sawyer is now with Southern Eye Associates, Jonesboro, Arkansas.

Correspondence: Dr Sawyer, Southern Eye Associates, 601 E Matthews, Jonesboro, AR 72401 (willsawyer@yahoo.com).

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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 his-

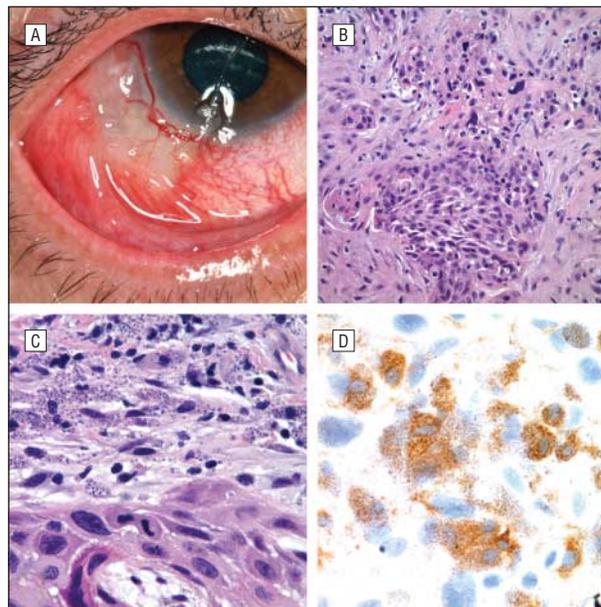


Figure 1. Clinical photograph and photomicrographs. A, Right conjunctival mass, with a yellow gelatinous temporal lesion extending from the 9-o'clock position to the 12-o'clock position with associated symblepharon and feeder vessels. B, Invasive squamous cell carcinoma, moderately differentiated (hematoxylin-eosin,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

topathological confirmation of the organism in conjunctiva, lacrimal gland, and liver specimens.

Report of a Case. A 39-year-old HIV-positive Guatemalan man had decreased vision, epiphora, and pain in the right eye for 18 months. He had been continuously maintained on highly active antiretroviral therapy, azithromycin, and sulfamethoxazole/trimethoprim for 2 years. He denied fever, sweating, or flulike symptoms.

Best-corrected visual acuity was 20/25 OD and 20/20 OS. The pupils were 5 mm on the right and 7 mm on the left, briskly reactive to light, and without relative afferent pupil defect. Extraocular movements were full without restriction. Intraocular pressures were 17 mm Hg in both eyes. The right upper eyelid was mildly ptotic and swollen. The slitlamp biomicroscopic appearance is shown in **Figure 1A**. Funduscopic examination results were unremarkable. Ultrasound biomicroscopy and B-mode ultrasonography of the globe did not suggest extension into deeper structures or transscleral invasion.

Computed tomography of the orbit revealed disease limited to preseptal soft tissue. Laboratory evaluation demonstrated a viral load of less than 48 copies/mL and a CD4 lymphocyte count of 79 cells/ μ L. Excisional biopsy of the mass showed moderately differentiated invasive SCC as well as intracellular microorganisms in histiocytes (**Figure 1B**). Special stains for *Histoplasma* and *Toxoplasma* were negative. High-power oil immersion highlighted the *Leishmania* amastigotes (**Figure 1C**), and CD68 staining confirmed their presence in macrophages (**Figure 1D**). The Centers for Disease Control and Prevention confirmed the microorganisms as *L donovani chagasi*.