



“Euphorbia helioscopia Sap Keratouveitis: A Case Report”

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Background

Euphorbia is a very large and diverse genus of flowering plants, commonly called spurge, including approximately 2,000 species. *Euphorbia helioscopia* is an herbaceous annual plant, native to most of Europe, northern Africa, and most of Asia. It is known that the sap of many Euphorbia plants may be toxic to both skin and eye on contact. Guggenheim et al. reported the first case of eye injury caused by Euphorbia sap, in 1926 (1). Since then, several cases have been described with ocular manifestations ranging from mild conjunctivitis to severe keratouveitis.

Purpose: To report a case of anterior segment toxicity after accidental ocular exposure to the milky sap of Euphorbia species

Case report

A 55-year-old male patient suffered from accidental ocular exposure to *Euphorbia helioscopia* sap in his left eye. Patient noted immediate burning sensation, lacrimation, and photophobia. His symptoms persisted despite irrigating his eye with water. One hour after the contact, he attended the clinic due to conjunctival hyperemia and severe pain. Upon slit lamp examination, conjunctival injection with mild superficial punctate keratopathy was noted. Patient was treated with a topical antibiotic and lubrication.



Figure 1. *Euphorbia helioscopia* plant and milky sap



Case report

After 24 hours, he presented with blurred vision. Best-corrected visual acuity (BCVA) was 0.1 (decimal scale). A large corneal epithelial defect was observed with accompanying stromal edema and Descemet membrane folds. There was moderate anterior chamber reaction. Toxic keratouveitis was diagnosed and patient was treated with topical antibiotic, steroid and cycloplegic drops. Complete resolution was observed 6 days later.

Discussion

According to literature most common manifestations following ocular toxicity by Euphorbia include immediate pain, epiphora, lid swelling, photophobia,

conjunctival injection, epithelial ulceration, corneal edema and anterior-chamber inflammation(2). There are no reports of posterior segment involvement. Visual loss may present as a delayed feature, occurring 24 hours after eye contact. The clinical findings can be explained by composition of Euphorbia latex: phenols, alkaloids and sesquiterpene lactones are liposoluble and can penetrate epithelial cellular membranes and the anterior chamber(3). Individuals who work with Euphorbia species should wear protective goggles while handling the plant. Ophthalmologists need to be aware of the importance of following such patients closely, since even an initial mild corneal punctate epitheliopathy may progress to large epithelial defects and severe keratouveitis.

REFERENCES

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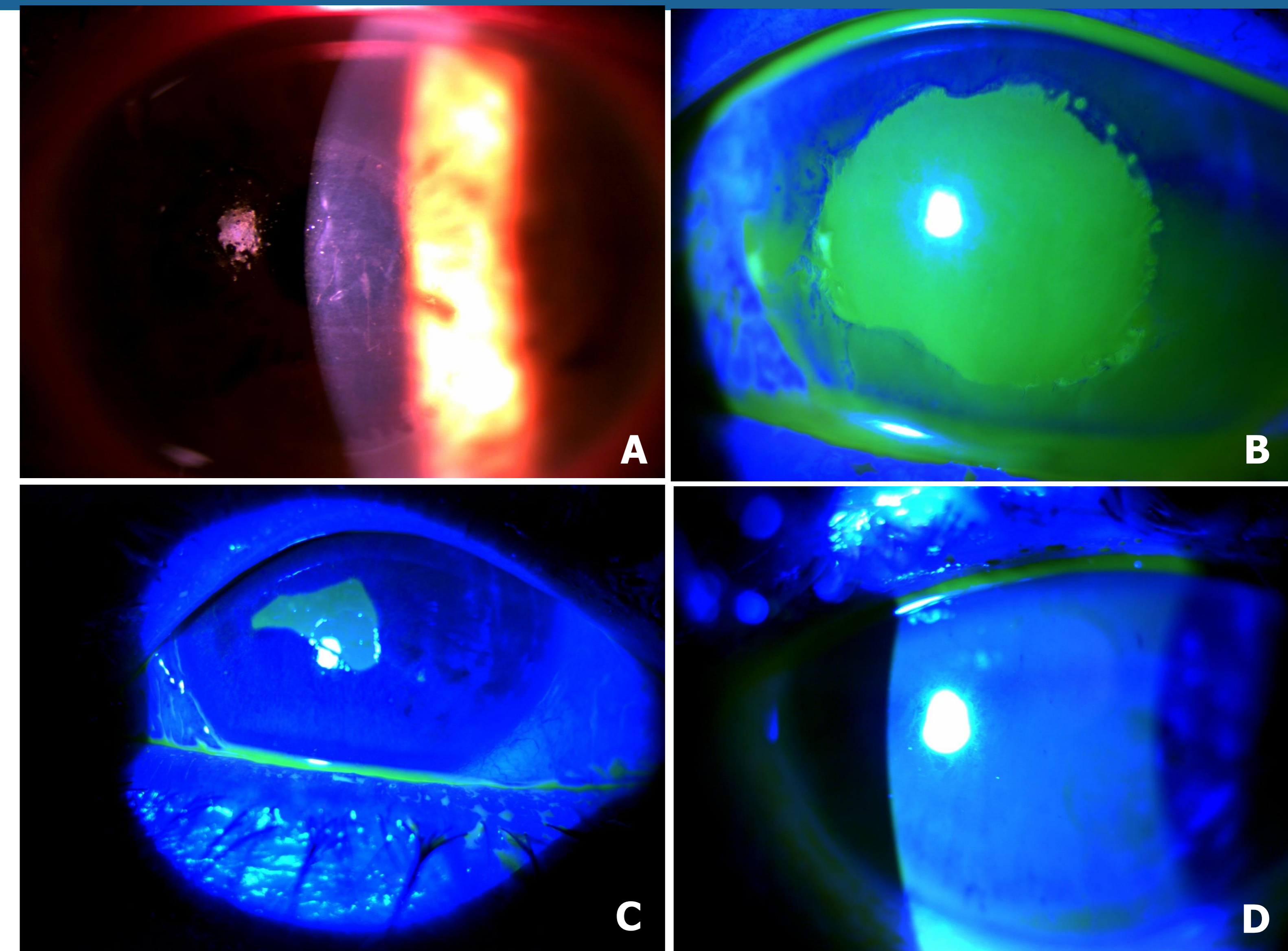


Figure 2. Slit lamp photos 24 hours (A+B), 3 days (C) and 5 days (D) following exposure to the milky sap