

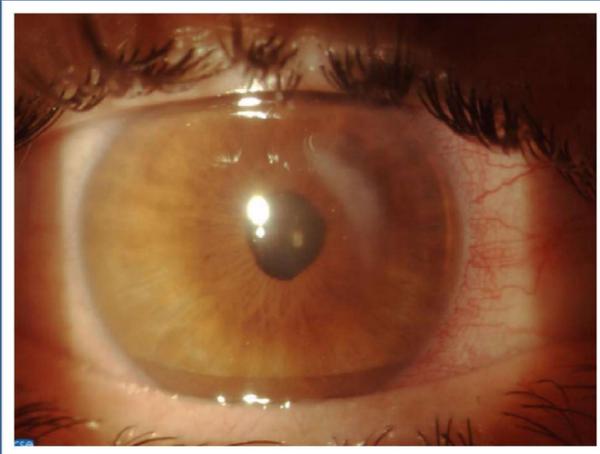
Diffuse lamellar keratitis secondary to a dog bite 12 months after LASIK

K. Moutsouris M.D., I. Kontari M.D., G. Asimellis Ph.D., Prof. A. J. Kanellopoulos M.D.

Laservision.gr Athens, Greece

Purpose: We report a case of a severe keratitis secondary to a dog bite in a 14-month post-op LASIK patient.

Introduction: Ocular trauma following LASIK surgery may occur at any time after the original procedure. Severe irregular astigmatism and unpredictable refractive change may occur secondary to penetrating cornea injury. Very little is reported in the peer-reviewed literature concerning either active sports, reptile or insect attacks, and canine attacks, the most serious associated with severe eyelid and adnexal injury. We report herein a rare case of a severe ocular infection from a dog bite in a LASIK patient. This case highlights the potential vulnerability of LASIK flaps to animal bite trauma in melting and/or developing DLK. To our knowledge this is the first such documented case.



Slit lamp image of the affected eye at 1 week after presentation

Methods: A 41-y.o. caucasian woman presented with a dog-bite associated ocular trauma, that penetrated the cornea and partially lifted a previous uneventful LASIK flap. The trauma presented with severe vision loss, intense pain, and photophobia. Interface irrigation and vigorous antibiotics with topical moxifloxacin 0.5%, vancomycin 25mg/ml solutions improved the infiltrate, but DLK and melt further complicated the course. Further management included topical corticosteroids and oral minocycline as an anti-proteolytic agent.

Results: Vigorous surgical and medical intervention and close follow-up resulted in good visual rehabilitation to UDVA 20/20 at the 8 month follow up.

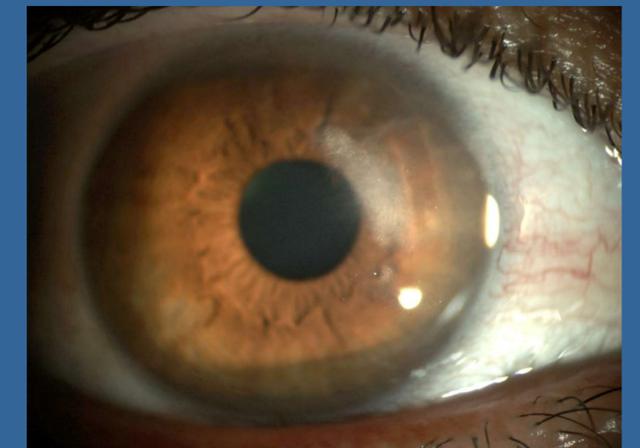
Discussion: Ocular dog bites have been reported to cause soft tissue lacerations, adnexal injuries, such as lid lacerations, canalicular avulsion, eye lid ptosis, facial nerve damage, and superior oblique muscle palsy, and rarely, intraocular injury. Most of the reported cases in the peer-reviewed literature describe ocular dog bites that usually involve family members, as in our case and not strangers. Our case shows unique features of managing 3 problems:

First an apparent infectious keratitis although not culture-proven, that resolved early with vigorous antibiotic treatment. Additional to this problem an area of the traumatized cornea developed severe melt and later the LASIK flap interface developed severe DLK. The initial trauma from the dog bite may have caused this development, although the flap irrigation and possibly the topical medications may have potentially played a role in these. The lifting of the LASIK flap for culture and antibiotic irrigation appeared to address effectively the presumed microbial infiltrate. The secondary development of severe DLK and an area of cornea melting around the bite perforation of the flap were diagnosed timely and differentiated from the initial infectious component facilitating timely corticosteroid administration and apparent clinical improvement.

Conclusion: Infectious keratitis may complicate pet bite injuries to the cornea. Corneas that have been subjected to LASIK may respond to cornea injury with severe DLK.



Slit lamp image of the affected eye at the day of presentation



Slit lamp image of the trauma area 3 months after presentation