Cross-linking (CXL) treatment for recurrent post-LASIK keratitis: case report

Jorge Cazal, MD, FEBO
Fco. Javier Sanchez Fabo, MD

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INTRODUCTION

• Ocular infections after LASIK procedures are rare but can lead to a serious reduction of visual acuity\textsuperscript{1-3}
• Incidence of infection after LASIK can vary widely (0-1.5 %) \textsuperscript{4}
• Propionibacterium acnes is a ubiquitous gram-positive anaerobic pleomorphic rod, present in nearly 44% of healthy conjunctivae and in peripheral lung tissue, mediastinal lymph nodes, and intestine \textsuperscript{5,6}
• P. acnes has been associated with conjunctivitis, orbital and preseptal cellulitis infectious keratitis in a corneal graft, delayed-onset endophthalmitis, keratitis after LASIK and after implantation of Ahmed glaucoma valve. \textsuperscript{7-11}
• In several case series (N=2 to 16), riboflavin/UVA was reportedly effective against infectious keratitis. \textsuperscript{12,13}
CASE PRESENTATION

P. Acnes Post Lasik Keratitis

• 12/2012 OU LASIK
• OD 3 days post op keratitis
• OD epi ingrowth at 7 month PO
• 11/2013 OD Recurrent Keratitis *
• CXL STANDARD PROTOCOL
• 5 month FU OD UCDVA  20/40

AS-OCT pre-intra-post CXL
11 months afterLASIK
P. ACNES POST LASIK KERATITIS : FULL EVOLUTION

*flap lift and rinse w/ATB*

OD 3 days after LASIK

**Epi ingrowth**

7 month post LASIK

**Epi ingrowth removed Flap sutured**

Recurrent Keratitis

12 month post LASIK

CCXL

5 month post CXL
CONCLUSION

• The thinnest point were 380 µm
• Topical fortified antibiotic were not discontinued
• We found that the photoactivated riboflavin treatment did not seem to cause any additional complication
• Further study is needed to elucidate mechanisms of action involved in treatment of infectious keratitis with photoactivated riboflavin
• Photoactivated riboflavin may hold promise as a one-time treatment for superficial corneal infection and may help address problems with antibiotic-resistant organisms, patient compliance
BIBLIOGRAPHY


