Microbial Keratitis After Penetrating and Endothelial Keratoplasty

Nicolas Dohse  
*Thomas Jefferson University, nicolas.dohse@jefferson.edu*

Turner D. Wibbelsman  
*Thomas Jefferson University, turner.wibbelsman@jefferson.edu*

Sara Rapuano

Kristin Hammersmith  
*Thomas Jefferson University, kristin.hammersmith@jefferson.edu*

Parveen Nagra  
*Thomas Jefferson University, parveen.nagra@jefferson.edu*

See next page for additional authors.

Follow this and additional works at: https://jdc.jefferson.edu/si_ctr_2022_phase1

Part of the Ophthalmology Commons, and the Translational Medical Research Commons

**Let us know how access to this document benefits you**

**Recommended Citation**

Dohse, Nicolas; Wibbelsman, Turner D.; Rapuano, Sara; Hammersmith, Kristin; Nagra, Parveen; Rapuano, Christopher; and Syed, Zeba A., "Microbial Keratitis After Penetrating and Endothelial Keratoplasty" (2020). *Phase 1*. Paper 79.  
https://jdc.jefferson.edu/si_ctr_2022_phase1/79

This Article is brought to you for free and open access by the Jefferson Digital Commons. The Jefferson Digital Commons is a service of Thomas Jefferson University's Center for Teaching and Learning (CTL). The Commons is a showcase for Jefferson books and journals, peer-reviewed scholarly publications, unique historical collections from the University archives, and teaching tools. The Jefferson Digital Commons allows researchers and interested readers anywhere in the world to learn about and keep up to date with Jefferson scholarship. This article has been accepted for inclusion in Phase 1 by an authorized administrator of the Jefferson Digital Commons. For more information, please contact: JeffersonDigitalCommons@jefferson.edu.
Introduction: The purpose of this study is to review the incidence, risk factors, and outcomes of bacterial and fungal keratitis after penetrating keratoplasty (PK) and endothelial keratoplasty (EK).

Methods: The medical records at Wills Eye Hospital were reviewed for all cases of confirmed microbial keratitis following PK or EK performed between May 1, 2007 and September 1, 2018. Charts were examined to obtain demographic information, past ocular history, details of the microbial keratitis, and graft outcomes.

Results: A total of 2100 transplants (1269 PK and 831 EK) were performed in 1864 eyes of 1601 patients. The incidence of microbial keratitis after PK (7.5%) was significantly higher than after EK (1.3%) (p<0.05). The rate of infection in eyes with two or more prior transplants (9.3%) was significantly higher than in eyes with one prior transplant (3.1%) (p<0.05). Infections were due largely to gram positive bacteria (49.0%), followed by gram negative bacteria (26.5%) and fungus (10.2%). Most grafts failed after infectious keratitis (81.6%).
**Discussion:** Microbial keratitis is a relatively common occurrence in patients with prior keratoplasty, and particularly in eyes with prior PK or multiple prior transplants. Infection is an important cause of graft failure and further surgical intervention. To the best of our knowledge, this is the largest review of microbial keratitis in cases of prior PK, and the only review in eyes with prior EK.