

Accepted Manuscript

Preoperative aqueous cytokine levels are associated with a rapid reduction in endothelial cells after penetrating keratoplasty

Yukari Yagi-Yaguchi, Takefumi Yamaguchi, Kazunari Higa, Terumasa Suzuki, Hiroyuki Yazu, Naohiko Aketa, Yoshiyuki Satake, Kazuo Tsubota, Jun Shimazaki



PII: S0002-9394(17)30300-8

DOI: [10.1016/j.ajo.2017.07.005](https://doi.org/10.1016/j.ajo.2017.07.005)

Reference: AJOPHT 10203

To appear in: *American Journal of Ophthalmology*

Received Date: 18 January 2017

Revised Date: 10 July 2017

Accepted Date: 10 July 2017

Please cite this article as: Yagi-Yaguchi Y, Yamaguchi T, Higa K, Suzuki T, Yazu H, Aketa N, Satake Y, Tsubota K, Shimazaki J, Preoperative aqueous cytokine levels are associated with a rapid reduction in endothelial cells after penetrating keratoplasty, *American Journal of Ophthalmology* (2017), doi: 10.1016/j.ajo.2017.07.005.

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Abstract

Purpose: To evaluate the influence of preoperative inflammatory cytokine levels in the aqueous humor (AqH) on the endothelial cell density (ECD) after penetrating keratoplasty (PKP).

Design: Prospective interventional, consecutive case series.

Methods: This study includes 70 consecutive patients (mean age 73.7 ± 10.6), who underwent PKP (37 eyes) or cataract surgery (controls, 33 eyes). A total of 70 AqH samples were collected at the beginning of each surgery. The levels of cytokines (interleukin[IL]-1 α , IL-1 β , IL-4, IL-6, IL-8, IL-10, IL-12p70, IL-13, IL-17A, interferon [IFN]- α , IFN- γ , monocyte chemotactic protein [MCP]-1, E-selectin and P-selectin) in AqH were measured by multiplex beads immunoassay. The subjects who underwent PKP were classified into two groups: $ECD \geq 1200$ cells/mm² at 6 months (24 eyes), and $ECD < 1200$ cells/mm² at 6 months (13 eyes).

Results: The ECD at 3 months significantly correlated with the preoperative levels of IL-10 ($r = -0.428$, $P = 0.02$) and IFN- γ ($r = -0.412$, $P = 0.029$). The ECD at 6 months significantly correlated with the preoperative levels of IL-10 ($r = -0.399$, $P = 0.024$), MCP-1 ($r = -0.444$, $P = 0.011$) and IFN- γ ($r = -0.474$, $P = 0.006$). The preoperative levels of IL-6, IL-10, MCP-1, IFN- γ and P-selectin in AqH were significantly higher in eyes with $ECD < 1200$ cells/mm² compared with those with $ECD \geq 1200$ cells/mm² at 6 months ($P < 0.05$).

Conclusions: Higher preoperative levels of IL-10, MCP-1, and IFN- γ in the AqH were associated with low ECD after PKP.

Download English Version:

<https://daneshyari.com/en/article/5702951>

Download Persian Version:

<https://daneshyari.com/article/5702951>

[Daneshyari.com](https://daneshyari.com)