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Midterm outcomes of penetrating keratoplasty after cultivated oral mucosal epithelial transplantation in chemical burn

Alireza Baradaran-Rafii, Siamak Delfazayebaher, Nasser Aghdami, Ehsan Taghiabadi, Shahram Bamdad, Danial Roshandel

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AUTHORS: Alireza Baradaran-Rafii, MD,[1] Siamak Delfazayebaher, MD,[1] Nasser Aghdami, MD, PhD,[2] * Ehsan Taghiabadi, MSc,[2] Shahram Bamdad, MD,[3] Danial Roshandel, MD[1]

Short running head: Midterm Outcomes of PKP after COMET

[1] Ocular Tissue Engineering Research Center, Shahid Beheshti University of Medical Sciences, Tehran, Iran

[2] Department of Regenerative Biomedicine at Cell Science Research Center, Royan Institute for Stem Cell Biology and Technology, ACECR, Tehran, Iran

[3] Department of Ophthalmology, Poostchi Eye Research Center, Shiraz University of Medical Sciences, Shiraz, Iran

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* The first two authors contributed equally to this work.

* Corresponding author: Nasser Aghdami, MD, PhD, P.O.Box: 16635-148, Department of Regenerative Biomedicine at Cell Science Research Center, Royan Institute for Stem Cell Biology and Technology, ACECR, Tehran, Iran. Email: nasser.aghdami@royaninstitute.org

Abstract

Purpose: To evaluate the mid-term outcome of penetrating keratoplasty (PKP) after cultivated oral mucosal epithelial transplantation (COMET) in patients with bilateral total limbal stem cell deficiency (LSCD) due to chemical burn. Methods: In this prospective interventional nonrandomized case series, optical PKP was performed in patients with severe stromal opacity after successful COMET. Main outcome measures were stability of the ocular surface, visual acuity improvement and corneal graft survival. Results: Fourteen eyes of 14 patients with successful COMET were included. Time interval between PKP and COMET was 7.6±1.3 months (6-9 months). Mean follow-up period was 28.2 ± 8 months (14-40 months, median 30 months). Epithelial healing was complete after 7 days in all eyes. Thirteen eyes had stable ocular surface without epithelial