

ABSTRACT

Central corneal thickness in diabetes: Evidence of endothelial stress

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Purpose: To evaluate the effect of non-insulin dependent diabetes on the central corneal thickness and compare it with that of normal individuals

Design of study: Hospital based case-control study

Participants: One hundred patients with NIDDM evenly divided between those with less than 5 years of diabetes (group 1) and those with diabetes of more than 10 years of duration (group 2) were included in the study. Normal subjects without diabetes or any other ocular and systemic pathology age and gender matched to the NIDDM patients served as controls for the two diabetic groups. One eye of each patient and control was chosen for the study.

Methodology: Topcon Specular microscope (Topcon SP 2000P) was used to measure the corneal thickness in the cases and control groups.

Results: Mean corneal thickness of patients with less than 5yrs of diabetes was 0.5162 ± 0.0367 m and control group was 0.5136 ± 0.0306 m with no significant difference in two groups. ($p=0.65$). However, mean corneal thickness of patients of group 2 was 0.5212 ± 0.0306 m and control group was 0.49957 ± 0.0330 m with significant difference in both groups. ($p=0.001$)

Conclusion: The study suggests abnormal function of corneal endothelium in diabetes and warrants for minimal invasive procedures for surgery and prompt treatment of other compounding endothelial insults in diabetic patients. Al-shifa Journal of Ophthalmology 2005;1:42-44(c) Al-shifa Trust eye Hospital, Rawalpindi, Pakistan.