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Comparative study of the ocular surface and tear film on computer users and contact lenses wears

Luis Fernando Barba Gallardo

Universidad Autónoma de Aguascalientes, México

Introduction: Impression cytology is a technique that allows the conjunctiva collecting surface layers of conjunctival epithelium for morphological examination of the ocular surface. The use of contact lenses causes changes in the behavior of the tear for which it must recognize the presence of goblet cells and/or quality in the training of its secretion in contact lens wearers.

Objective: Correlating the relationship of tear quality contact lens wearers and computer users with respect to tear quality.

Methodology: Conjunctival surfaces and tear quality of 100 users of contact lenses, 100 patients and computer users were studied, and 120 controls all without history of ocular pathology making impression cytology, tear breakup time, green lissamine, test ferning and Schirmer test was done. The quality of goblet cells was evaluated by means of impression cytology, the sample was taken from the upper bulbar conjunctiva using Millipore HAWP304 (paper dex nc) (with a pore size of 0.45 microns) 5x5 mm in size, then PAS stained with hematoxylin. And epithelial goblet cells were observed under microscope where five fields were averaged. The severity of dry eye disease was assessed using Nelson criteria.

Results: The experimental patients and controls had a significant difference in tests, comparing the ratio of cell count between computer users and non-users a value of P was statistically significant ($P=0.00$).

Conclusions: The use of contact lenses has a ratio decrease in goblet cell and poor tear quality. And there is a significant correlation of tear quality and goblet cells in computer users.

Biography

Luis Fernando Barba Gallardo has completed his PhD from Universidad Autónoma de Aguascalientes (UAA), School of Basic Sciences. He is the Secretary of Research and Post-graduate student of Science of Health in UAA. He has published more than 10 papers in many different journals, and has been serving as a Reviewer of manuscripts.

barbaluis@yahoo.com**Notes:**