



Letter to the editor

Conjunctival impression cytology

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Dear Editor,

Conjunctival impression cytology is an easier, cheaper and faster non-invasive technique used as an alternative of biopsy to get epithelial cells from ocular surface. With the help of simple light microscope, special filter paper and Periodic Acid Schiff (PAS) or hematoxylin staining, epithelial cell information and goblet cell density can be determined easily. Moreover, ocular inflammatory markers, cytokinins, chemokinins, ocular mucin, HLA-DR, CE 23 and different gene expression can be investigated by applying different procedures such as immunoblotting reactions, polymerase chain reactions, immunocytochemistry or flow cytometry (Baudouin et al, 1997).

In the previous issue of Nepalese Journal of Ophthalmology, Kumar et al described a study on impression cytology in computer users (Kumar et al, 2013). Authors concluded that the computer use of more than one year duration makes abnormal conjunctival cytology. In that study with sample size of 15 computer users, all the subjects who use computer 4-6 hours a day, had 3rd or 4th stage of cytology. In addition to giving important information about the eyes of computer users, this report has raised a number of questions to be answered scientifically. However, a study with such a small sample size may not be strong enough to generalize its findings.

Studies with a greater sample size are necessary to identify the causes of cellular changes by computer use. The findings in this study are contradictory to the results of a recent study done by Mukhopadhyay et al (2013). In their cohort of 2000 normal people, (which was also conducted in India), the impression cytology was found to be of grade 1 in almost all of the office workers who work in computer 8 hours or more in a day.

Artificial lubricating drops were found to be helpful in improving the conjunctival cytology in dry eye patients (Aragona et al, 2002). Lubricating drops or reduction in computer hours may also improve the conjunctival cytology in the computer users.

Significant changes in conjunctival cytology have been found in contact lens wearers (Doughty and Naase, 2008). Most of the contact lens wearers use computer (Unpublished data, Nepal Eye Hospital). There might be serious changes in the conjunctival cytology of those subjects who wear contact lens and use computer most of the working hours.

We are carrying out a three-year single masked clinical trial on impression cytology in different types of contact lens wearers who work with computer for a varying duration of time. The findings of this study may help to answer some of these questions.



References

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