

R1 R2 R3 PG0 PG1 Estagiário Tecnólogo PIBIC

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Service (sector)

Cornea and External Disease

Nº CEP

Improved Impression cytology technique for the evaluation of the ocular surface.

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Purpose: To develop an improved impression cytology (IC) technique and to adapt the staining procedure for this noninvasive biopsy method.

Methods: IC was performed in 101 eyes of 83 patients with ocular surface disorders between July 1999 and may 2000. Topical anesthesia was instilled prior to the procedure. The specimens of IC were obtained by pressing a filter paper from Millipore on the conjunctiva. After 5 seconds it was removed with a peeling motion. Samples were fixed for 10 minutes with glacial acetic acid, 37% formaldehyde and 70% ethanol 1:1:20. They were stained with PAS, hematoxylin and modified Papanicolaou to be examined under the microscope. Goblet cell concentration, nucleus/cytoplasm (N/C) ratio of epithelial cells and presence of inflammatory or immune cells were evaluated.

Results: We observed epithelial cells in all samples varying in density according to the disease. Goblet cells were observed only in areas with preserved conjunctival epithelium. Absence of goblet cells was expected in areas of high metaplastic conjunctival epithelium.

Conclusion: IC provided excellent conjunctival and corneal surface information without surgical intervention. It's far less traumatic and superior to cell scraping techniques. It also provided a way for monitoring the evolution of the ocular surface during disease or therapy.