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Abstracts

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Protein adsorption to silicone-hydrogel contact lenses – An in vivo study

SANTOS L (1, 2), LIRA M (2), REAL OLIVEIRA MECD (2), OLIVEIRA R (1), AZEREDO J (1)
(1) Biological Engineering, Braga
(2) Center of Physics, Braga

Purpose To analyse the protein adsorption to different types of silicone-hydrogel contact lenses (CL).

Methods The CL used in these work were Purevision™, Focus® Night & Day™, Acuvue®Advance™ with Hydraclear. It was also used conventional disposable hydrogel Acuvue® for comparison. The adsorbed proteins were recovered after the contact lenses removed from patients from both sexes with mean ages of 22.1 ± 4.2 years. Every patient used a conventional disposable hydrogel during 15 days and a silicone-hydrogel CL during 1 month, one in each eye, in a daily wear schedule. Proteins were analyzed by SDS-Page.

Results Conventional hydrogel and silicone-hydrogel CL used by the same patient exhibit different adsorbed proteins. This result suggests that the tear film proteins may establish different interactions with a conventional hydrogel and a silicone-hydrogel. It was also observed different proteins adsorbed on the several types of silicone-hydrogel CL used in this study. The CL with no surface treatment (Acuvue®Advance™ with Hydraclear) appears to adsorb a major amount of proteins compared with the one with surface treatment (Purevision™ and Focus® Night & Day™).

Conclusion The CL material influences, as well as the presence of a surface treatment, the type of tear film protein adsorbed.