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Abstracts

Guest Editor

J. Jonas, Heidelberg, Germany
Protein adsorption to silicone-hydrogel contact lenses – An in vivo study

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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.