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Abstracts

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Vilamoura, Portugal

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Pre-lens tear film stability before and after contact lenses wear

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Purpose The purpose of this study was to observe and compare the pre-lens tear film (PLTF) of silicone hydrogel lenses and a conventional disposable hydrogel lens worn in a daily wear for 30 days and 15 days respectively.

Methods - The Non-Invasive Tear Break-Up Time (NITBUT) was measured on 31 eyes: 6 Galyfilcon A, 5 Balafilcon A, 5 Lotrafilcon A, 5 Lotrafilcon B and 10 Etafilcon A. The mean age of the patients was 23.6 ± 5.5 years. All lenses were used in a daily wear schedule.- When contact lenses are being worn, the pre-lens tear film non-invasive break-up time (PLTF NITBUT) is recorded.- The Keeler Tearscope Plus, with the help of a grid insert, was used to observe the regularity of the image of the grid. It was measured the time interval between the last blink and the appearance of the first distortion on the grid.- The pre-lens tear film was evaluated for 3 times in the first day of use of each lens and after 30 days (silicone hydrogel lens) and 15 days (conventional hydrogel) of wear.

Results - The mean value (± SD) of PLTF NITBUT for the new contact lenses was 6.21s (±2.44) and after wear was 5.44s (±2.38). - If we consider each material separately, we have the mean value (±SD) of the new contact lenses and the mean value (± SD) for weared lenses respectively: o Galyfilcon A : 5.79s (±2.39), 4.59s (±2.11)o Balafilcon A : 5.63s (±1.53), 7.03s (± 2.16)o Lotrafilcon A: 8.40s (±2.77), 5.83s (±3.41)o Lotrafilcon B: 7.24s (±3.17), 3.84s (±1.00)o Etafilcon A : 5.13s (±1.72), 5.77s (±2.28)

Conclusion - In this study there are no significant differences between the measurements obtained for pre-lens tear film stability before and after contact lenses wear.