PH8: Tear Film Osmolarity in Young Malay Adults after Wearing Soft Contact Lenses for 6 Months

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ABSTRACT

Introduction: This study investigated changes in tear film osmolarity in young myopic Malay adults after wearing soft contact hydrogel lenses for 6 months. Methods: A total of 48 myopic subjects participated in this study. Twenty-four of them were fitted with hydrogel contact lenses (A) and another 24 were prescribed with spectacles (B) as control group. McMonnies Dry Eye questionnaires (MDEQ) were used during screening to exclude subjects with dry eye signs and symptoms. Refraction was conducted subjectively and visual acuity (VA) was measured using LogMAR chart. Tear film stability was evaluated using TBUT and tear film osmolarity was measured using the osmometer. All measurements were conducted at baseline and 6 months. Results: Mean age of all subjects was 21.23 ± 1.3 years, mean refractive error was -2.43 ± 1.21DS, mean TBUT was 7.81 ± 1.78s and mean tears osmolarity was 296.82 ± 12.37 mOsm/L. Results and analysis at baseline and 6 months are as follow: Mean TBUT for A was 7.65 ± 1.88 s and 7.62 ±1.68s; (p=0.27), for B was 7.96 ± 1.75 s and 8.01 ± 1.63 9 s; (p=0.33), mean tears osmolarity for A was 293.33 ± 13.52 mOsm/L and 298.54 ± 12.47 mOsm/L; (p= 0.01), for B was 300.30 ± 11.21 mOsm/L and 300.57 ± 12.61 mOsm/L; (p= 0.63). Conclusion: Wearing soft hydrogel contact lens alters tear film osmolarity. The results support previous works in other population.

KEY WORDS: Malay, myopia, tears film osmolarity, tear break up time, contact lens