Difference in higher order aberration values between two different types of artificial tear supplements

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Purpose: To evaluate changes in the third and fourth-order aberrations after application of two different types of artificial tear supplements.

Settings: Refractive Department, Eye Hospital “Svjetlost” Banja Luka, Bosnia-Herzegovina.

Patients and methods: Data of 100 patients (200 eyes) between 18 and 50 years of age have been selected. Patients were divided in two groups, and each of the group received different type of artificial tear supplements. Higher order aberration analysis was made on Hartmann-Shack aberrometer immediately after tear supplements application, as well as 5 and 10 minutes afterward. Changes in coma, trefoil and spherical aberration were collected for each patient in both groups.

Results: There was no difference between groups in the values of coma, trefoil and spherical aberrations immediately after tear supplement application, as well as after 5 and 10 minutes.

Conclusion: Both types of artificial tear supplements give no statistically significant change in the values of coma, trefoil and spherical aberrations. Future studies can focus on longer time intervals between application and other types of tear supplements available on the market.

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