

R1 R2 R3 PG0 PG1 Estagiário Tecnólogo
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Service (sector) Refraction and Contact lenses N° CEP

Fitting test hybrid material contact lens for correction of keratoconus and regular myopic astigmatism patients

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Purpose: To evaluate the comfort and visual performance in relation to two different types of contact lenses used: hybrid material (HM) and rigid-gas-permeable (RGP), in patients with regular myopic astigmatism and irregular astigmatism with cornea ectasia. **Material and Methods:** A randomized, double masked, prospective study of 22 patients with the diagnosis of myopic astigmatism was conducted. In one of the eyes a rigid-gas-permeable contact lens was adapted (DK 30), and on the other a hybrid material contact lens was adapted (DK 23). The patients were submitted to the following tests: measurement of the comfort level by means of the analogical visual scale, tear break-up time, visual acuity through use of the Bailey-Lovie scale adapted for 4 meters, functional acuity contrast test (FACT) and wavefront analysis. **Results:** 15 patients were female and 7 were male. Eight patients were diagnosed with keratoconus and 14 had the use, which later diagnosis of regular myopic astigmatism. The average age was: 32.13 ± 8.12 years. In relation to the comfort there was no association with the type of contact lens evaluated ($p = 0.350$). There was a variation in the comfort level during the first 7 days. The visual acuity increased between the 7th and the 15th day period of adaptation. Visual acuity stabilized right after this period. The visual acuity didn't show differences in relation to the lens type studied. It was verified that there is no difference in the tear break-up time ($p = 0.989$) in relation to the types of lenses studied and there was a decrease in the tear break-up time ($p = 0.001$) when we compared the measurement before the use of the lenses and after 2 months of their use. There is no difference in contrast sensitivity in the type of lenses used and between each type of lenses and the use of glasses ($p < 0,047$). High order aberrations analyzed decreased significantly when comparing patients with and without contact lenses, except for spherical and coma aberrations ($p = 0,394$). **Conclusion:** The comfort and visual performance when the hybrid material and the rigid-gas-permeable contact lenses were compared didn't show any significant difference in the patients nor when compared separately to regular myopic astigmatism and keratoconus patients.