EFFECT OF YELLOW FILTER ON MESOPIC CONTRAST THRESHOLD WITH AND WITHOUT GLARE IN MYOPIA CORRECTED BY LASER IN SITU KERATOMELEUSIS (LASIK)

M.J. Perez Carrasco, c.PUELL, c.SANCHEZ RAMOS, a.LANGA. Optica, Escuela Univ de Optica, Madrid, Spain.

Purpose: To determine the effect of a coated yellow filter on contrast threshold with and without glare under mesopic conditions in eyes having uncomplicated excimer laser in situ keratomileusis (LASIK) for myopia.
Methods: The mesopic contrast threshold was measured in the absence or presence of glare using the Mesoptometer II test in 35 right eyes of adult subjects (mean age 36.9 ± 7.4) after 12 and 60 months of LASIK surgery, with and without coated yellow filter (482 nm cut-off), and 30 emmetropic eyes of adult subjects (mean age 35.2 ± 4.7) as control group.
Results: Lasik group didn't discriminate the lowest contrast threshold without glare, however a 73.33% of control group reached it. When the yellow filter was interposed in the lasik group the proportion of subjects who discriminated the lowest contrast threshold increased by 20%. With glare, 11.43% of lasik group's subjects reached the lowest contrast threshold increasing by 14.29% with the yellow filter, and being of 46.67% in the control group. With the yellow filter, the contrast threshold mean improved with glare ($p = 0.0479$) and without glare ($p = 0.00012$) respect the lasik group without filter. Moreover, contrast threshold differences among control and lasik group were statistically significant, obtaining the control group the best contrast thresholds with glare ($p = 0.01$) and without glare ($p = 0.01$).
Conclusions: The effect of yellow filter without residual reflections had a positive influence on the mesopic contrast perception of eyes having uncomplicated excimer laser in situ keratomileusis (LASIK) for myopia.
Commercial Relationship: M.J. Perez Carrasco, None; **C. Puell**, None; **C. Sanchez ramos**, None; **A. Langa**, None.

Reviewing Codes (Complete): 158 functional imaging of basic visual processes - VN
Keyword, Presentation and Grant ID (Complete):
(1) : 368 contrast sensitivity
(3) : 520 physiological optics
(2) : 431 imaging/image analysis: clinical