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## Macular pigment optical density in Filipinos with age-related macular degeneration after lutein and zeaxanthin supplementation: A non-randomized comparative study

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**Objectives:** This study determined the baseline Macular Pigment Optical Density (MPOD) for those without retinal disease (group 1), those with non-exudative Age-related Macular Degeneration (AMD) (group 2), and those with exudative AMD (group 3). The effect of Lutein-Zeaxanthin supplementation was also determined.

**Method:** For this study, 120 participants completed the baseline MPOD measurement and supplementation of Lutein (12 mg/day) and Zeaxanthin (1 mg/day) for 90 days. Factors of MPOD were also obtained through a questionnaire.

**Results:** The mean baseline MPOD for the three groups were as follows: 0.382 DU (+0.10) for group 1, 0.333 DU (+0.07) for group 2, and 0.283 DU (+0.07) for group 3. Baseline MPOD of group 1 was statistically higher than baseline MPOD of group 2 (p=0.021) and group 3 (p=0.001). Mean baseline MPOD of group 2 is significantly higher than group 3 (p=0.017). MPOD after supplementation was also statistically significant using one-way repeated measures ANOVA. For Group 1, the MPOD levels increased significantly every month of supplementation, except on the third month when it did not reach statistical significance (p=0.001, p=0.003 and p=1.00 respectively). For Groups 2 and 3, MPOD levels increased significantly every month (group 2 p=0.021, p=0.010, p=0.008; and group 3 p=0.000, p=0.026, and p=0.00). Of the factors tested, weak and non-significant correlation was found.

**Conclusion:** Patients without retinal disease have higher MPOD than patients with Non-neovascular AMD, and an even higher MPOD than patients with neovascular AMD. Supplementation increased the MPOD for three months.

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## Single haptic fixation of IOL in tunnel bed

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This is a 1-point scleral fixation of IOL in tunnel bed when there is inadequate capsular bag support for the IOL. This technique can be used as a primary procedure when there is a large posterior capsular rent or a bag subluxation. It can be used as a secondary procedure of IOL implantation in aphakias with some capsular support in the opposite sulcus for the other haptic. This is a better option for managing subluxated or dislocated IOLs as we can fixate the same IOL without explanting it. The technique uses the available capsular remnant to support the leading haptic and an easy single scleral fixation suture to support the trailing haptic. Scleral fixation of the trailing haptic with 9-0 prolene is done in the sclera-corneal tunnel bed 0.75mm behind the limbus. There is no need for preparation of separate scleral beds for fixation. This saves time and provides adequate stability for the IOL without much manipulations or complications. This procedure can be done with routine PC IOLs –rigid/ foldable and single piece / three piece IOLs.

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Notes: