EVALUATION OF INTRARETINAL HYPERREFLECTIVE FOCI DENSITY WITH SD-OCT AFTER OZURDEX APPLICATION IN PATIENTS WITH EXUDATIVE AMD

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Purpose: To evaluate the change in the density of intraretinal hyperreflective foci in patients with exudative age-related macular degeneration (AMD) after intravitreal dexamethasone implant (Ozurdex) application. Methods: The charts of 8 patients with exudative AMD with persistent fluid on Spectral-domain optic coherence tomography (SD-OCT) despite regular ranibizumab were reviewed. SD-OCT images were obtained preoperatively as well as at the first, third and sixth postoperative months. A blind evaluation to detect the exact number of intraretinal hyperreflective foci was performed by the same study ophthalmologist. The first acquired macular OCT scan was set as a baseline for further retest scans. Gradual change in the density of intraretinal hyperreflective foci was evaluated. Correlation analysis between inflammatory hyperreflective foci and best-corrected visual acuity (BCVA) was also performed. Results: The mean age was 64.2±7.0 years. Preoperative mean BCVA was 0.8±0.5 logMAR, whereas it was found as 0.5±0.4, 0.5±0.3, and 0.6±0.3 logMAR at the first, third and sixth postoperative months, respectively (p=0.001). Significant improvement in BCVA was achieved in both the first and third postoperative months (p=0.018, p=0.012, respectively). Mean number of intraretinal hyperreflective focus was 34.4±12.1, 24.4±12.3, 11.9±6.4, and 33.2±7.9 at baseline, first, third, and sixth postoperative visits (p=0.0001). Statistically significant reduction was present in the total number of intraretinal hyperreflective focus in both the first and third postoperative months (p=0.012 and p=0.012) when compared to baseline values. Spearman analysis showed a positive correlation between the reduction in the density of intraretinal hyperreflective focus and improvement in BCVA only for the third postoperative visit (p=0.001, r=0.939). Conclusion: Reduced intravitreal inflammation secondary to Ozurdex application is thought to be related with decreased density of intraretinal hyperreflective foci that can be clearly seen in SD-OCT scans till the postoperative sixth month. Change in the density of such foci may also help us to predict visual prognosis in patients with exudative AMD.