Durability of Intravitreal Dexamethasone 0.7mg (OZURDEX) Injection in Patients with a Retinal Vein Occlusion

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Purpose:
To assess the effect of demographics and baseline ocular and OCT characteristics on the durability of intravitreal dexamethasone 0.7mg (OZURDEX) implant in patients with retinal vein occlusion (RVO).

Methods:
Consecutive patients (age, >18 years; follow-up, >6 months) with RVO treated with ≥2 Ozurdex injections without any additional injections/laser between 1st and 2nd Ozurdex injection were included. Patients with uveitis, any other ocular condition requiring anti-VEGF injections, prior vitrectomy or any other incisional ocular surgery within 6 months were excluded. Patient demographics and ocular characteristics were collected. Macular cube OCTs (Spectralis, Heidelberg) were double graded in a masked fashion. All discrepancies were adjudicated. SPSS was used for statistical analysis.

Results:
Thirty-four patients (35 eyes) were included: mean(SD) age, 72.9(12.6) years; 53% female; 53% White; 54% BRVO; 66% with HTN/stroke/MI/CAD-smoking). Twenty-four patients (69%) had incisional ocular surgery and/or retinal laser prior to 1st Ozurdex injection. Twenty-five (71%) patients were treated with mean(SD) of 5.7(8.5) anti-VEGF injections prior to 1st Ozurdex injection (>4 anti-VEGF injections in 12 (48%) patients). Mean(SD) central retinal thickness (microns) and macular volume (mm cubed) was 460.2(187.6) and 9.7(1.9) at 1st Ozurdex injection. OCT characteristics at 1st Ozurdex injection were 100% IRF, 89% ellipsoid disruption, 54% hard exudates, 50% ERM, and 46% SRF. Mean(SD) time between 1st and 2nd Ozurdex injection was 121.5(46.5) days; and was significantly associated with gender (male vs female, 138.6(10.9) vs 108.2(10.3) days, p=0.05) and anti-VEGF injections prior to 1st Ozurdex injection (yes vs no, 104.6(7.5) vs 163.5(11.8) days, p<0.001; ≤4 vs >4, 136.1(8.6) vs 93.4(11.9) days, p=0.006). Mean(SD) of 8.7(8.1) Ozurdex injections were performed during mean(SD) 54.1(30.2) months of follow-up. Nineteen (54%) eyes were pseudophakic at 1st and 33 (94%) at final Ozurdex injection. Mean(SD) logMAR VA did not differ significantly at 1st Ozurdex injection (0.55(0.36)), 2nd Ozurdex injection (0.58(0.41)), or final visit (0.62(0.53)). Lens status did not significantly correlate with VA throughout the study.

Conclusions:
Increased number of anti-VEGF injections was associated with a statistically significant decrease in the durability of the intravitreal dexamethasone implant in patients with RVO with persistent fluid.