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

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Summary

- 34 pts (35 eyes) with RVO treated with ≥2 Ozurdex injections were included
- Mean(SD) 72.9(12.6) years; 53% female; 53% White; 54% BRVO; 5.7(8.5) anti-VEGF injections prior to 1st Ozurdex injection
- OCT characteristics at 1st Ozurdex injection were mean(SD) CRT (460.2(187.6) um), MV (9.7(1.9) m^3), 100% IRF, 89% ellipsoid disruption, 54% hard exudates, 50% ERM, 46% SRF
- Mean(SD) time between 1st and 2nd Ozurdex injection was 121.5(46.5) days
  - Gender (male vs female, 138.6(10.9) vs 108.2(10.3) days, p=0.05)
  - 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)
- Therefore, 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

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, and all discrepancies were adjudicated
- SPSS was used for statistical analysis

Results (demographics, OCT characteristics)

- 34 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)
- 24 patients (69%) had incisional ocular surgery and/or retinal laser prior to 1st Ozurdex injection
- 25(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) 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

Results (VA)

- Mean(SD) logMAR VA did not differ significantly at 1st Ozurdex injection (0.55(0.36)), 2nd Ozurdex injection (0.58(0.41)), or at final visit (0.62(0.53))
- Mean(SD) logMAR VA at 1st Ozurdex injection was significantly associated with CRT (p=0.03), MV (0.04), and number of anti-VEGF injections prior to 1st Ozurdex injection (p=0.03)
- Lens status did not significantly correlate with VA throughout the study

Results (Ozurdex durability)

- Mean(SD) time between 1st and 2nd Ozurdex injection 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
  - Anti-VEGF injections before the 1st Ozurdex injection and Ozurdex injections only post 1st Ozurdex injection (yes (n=11(58%)) vs no (n=8(42%)), 118.5 vs 168.9 days, p=0.03)

Conclusion

- 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