Evaluating Ozurdex implants vs. Aflibercept injections in Treatment-Naïve Retinal Vein Occlusion Patients: Efficacy and Service Burden.

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Introduction

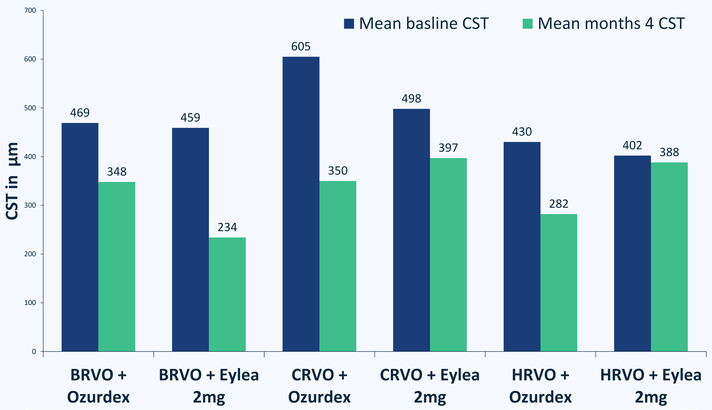
This audit aimed to examine intravitreal dexamethasone (Ozurdex) implants as a first-line treatment for macular oedema secondary to retinal vein occlusion (RVO). RVO is a leading cause of vision loss in the UK, with its incidence rising with an ageing population.(1) Optimising treatment strategies is crucial with the expected increase in the demand for RVO treatment.(2) This audit investigated the effectiveness and service burden of Ozurdex implants versus anti-VEGF (Aflibercept) in treatment-naïve RVO patients.

Method

This retrospective single-centre audit involved 92 RVO patients, with 43 receiving treatment: 22 with Eylea and 21 with Ozurdex. The patients were treatment-naïve and assigned to Ozurdex or Eylea based on local guidelines and patient preferences. The primary outcome was the comparison of best-corrected visual acuity (BCVA) and central subfield thickness (CST) over four months (18±1 weeks) for both treatments. The secondary goal was to assess the impact of these treatments on the efficiency of medical retinal services. An unpaired t-test was used to analyse BCVA and CST, and statistical analyses were performed using Minitab version 1.6.

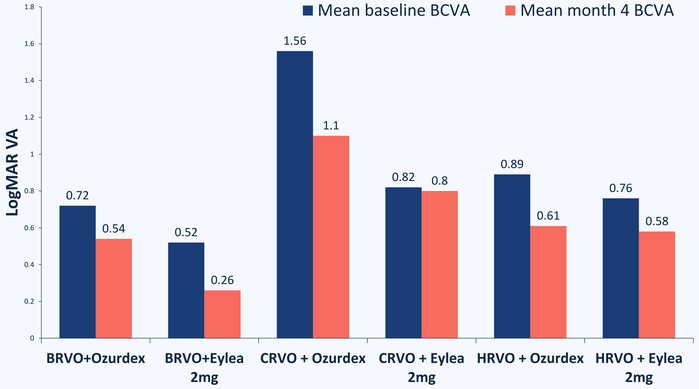
Results

Patients receiving Ozurdex at four months improved by 0.29 LogMar (from 1.03 to 0.74 LogMar), while those treated with Eylea gained an average BCVA improvement of 0.14 LogMar (from 0.68 to 0.54 LogMar). This was subdivided into the respective different subtypes as displayed in ***Graph 1***. The overall, two-tailed p-value for BCVA improvement was 0.1674, indicating no statistically significant difference between the treatment groups.



Graph 2 (above) demonstrates the baseline CST, and 4 month follow up for the different subtypes of new RVO following treatment with either Eylea or Ozurdex.

Graph 1 (below) demonstrates the baseline BCVA, and 4 month follow up for the different subtypes of new RVO following treatment with either Eylea or Ozurdex.



The baseline CST was 507µm for Ozurdex and 463µm for Eylea; reductions were 33.4% (169.5µm) and 28.8% (133.4µm), respectively, with a p-value of 0.4902, showing no significant difference.

Analysis of RVO subtypes also revealed no statistically significant differences in outcomes (p=0.2291) as shown in **Graph 2.** There was also a lower injection burden in the Ozurdex group, with 21 injections and 63 appointments versus 65 injections and 88 appointments for Eylea.

This audit suggests that Ozurdex provides comparable improvements in BCVA and CST to Eylea over a four-month period, with a significantly lower injection burden. The GENEVA study(3), which led to Ozurdex's licencing for CRVO/BRVO, identified the implant's peak effect at 60 days, with some studies, such as the COMRADE-C trial[(4)], noting a reduced efficacy period of Ozurdex after three months. Since this audit was limited to a four-month follow-up, extending the monitoring period may reveal outcome differences.

Complications from Ozurdex, particularly elevated intraocular pressure (IOP) and cataract progression remain treatment-limiting factors, and careful patient selection may help reduce adverse event rates.(4,5)

Treatment group	Eylea 2mg	Ozurdex
IOP (at 4 month) ≤24mmhg	**21**	**18**
IOP (at 4 month) 24-29mmhg	**1 (4.5%) ***	**2 (10%)**
IOP (at 4 month) ≥30mmhg	**0**	**1 ****

The rates of IOP were measured and are demonstrated above in **Table 1;** * was a known primary open angle glaucoma and ** indicated a case of neovascular glaucoma. The patients in this audit all had pressures less than 24mmHg at baseline. This audit did not include comprehensive adverse event tracking during the treatment period, which could have affected the complication rate. The reported 10% rate of elevated IOP for Ozurdex, aligns with rates seen in the GENEVA and SAFODEX-2 studies[(3,6)] (12.6%–39.6%).

Conclusion

This audit signifies that Ozurdex can offer similar efficacy to Aflibercept in BCVA and CST improvements at four months, while significantly reducing service demand through fewer injections and appointments. Careful patient selection and optimised implant intervals could enhance outcomes, making Ozurdex a promising option for RVO treatment as service demand increases.

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