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**CL177- EFFICACY AND SAFETY OF AN INTRAVITREAL DEXAMETHASONE IMPLANT IN VITRECTOMIZED PATIENTS WITH MACULAR EDEMA**

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**Introduction:** After pars plana vitrectomy, when the vitreous humour is replaced with less viscous substances such as aqueous humour or saline solution, molecular transport is disturbed, and diffusion and clearance rates are increased. Likewise, drug clearance is faster in vitrectomized eyes, and a shorter half-life has been noted for various medications. These findings raised doubts about the efficacy of intravitreal treatments in previously vitrectomized eyes, as retina specialists generally believe that a shorter half-life compromises their therapeutic effect. An intravitreal dexamethasone implant (IVDI - Ozurdex®, Allergan Inc, Irvine, CA, USA) was recently introduced. It consists of a biodegradable polymer that contains 700 µg of dexamethasone, allowing a gradual release of the drug up to six months. Published data about the efficacy of IVDI after vitrectomy is scarce. Therefore, we conducted to evaluate the functional effect of IVDI in previously vitrectomized patients with macular edema.

**Material and methods:** We conducted a retrospective, observational, multicenter case-series study comprising vitrectomized patients who underwent IVDI injections. Best-corrected visual acuity (BCVA) in ETDRS letters, intraocular pressure and side effects possibly related to the treatment were evaluated after each procedure. All relevant medical data were collected, including previous ophthalmologic treatments and comorbidities.

**Results:** Fourteen vitrectomized eyes of 14 patients were enrolled in the study. The average patient age was 65.7 years (range 53-83 years). All patients presented macular edema confirmed by SD-OCT and undertook at least one IVDI injection. Mean time between pars plana vitrectomy and IVDI was 17.1 months. Average follow-up after IVDI was 26.9 months, and patients underwent a mean of 3.3 treatments (range 1-9), Overall mean pre and post-treatment BCVA was 55.7±24.5 letters and 73.8±18.7 letters, respectively, a difference that reached statistical significance ( $p<0.01$ ). Mean gain in BCVA letter score was 18.1±21.2 letters after the first treatment and 14.6±24.8 at the end of follow-up ( $p=0.046$ ). Macular edema recurred in 71.4% ( $n=10$ ) after a single IVDI. Mean intraocular pressure increased transiently in one patient and there was one case of implant migration into the anterior chamber. No other local or systemic side effects were noted.

**Conclusion:** In our sample, IVDI proved to be a safe therapy with a positive functional effect, although with a high recurrence rate. Our results suggest that, despite prior vitrectomy, an intravitreal dexamethasone implant remains a valid therapeutic approach for eyes with persistent macular edema. Further prospective randomized studies with larger patient samples are needed to validate this conclusion.