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EFFICACY OF POST-VITRECTOMY INTRAVITREAL TRIAMCINOLONE THERAPY

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Introduction

Intravitreal triamcinolone acetonide (IVTA) is a corticosteroid that has been applied with an increasing frequency in several intraocular neovascular and edematous diseases. Although its efficacy is universally accepted in eyes with an intact vitreous body, few studies have focused on its proprieties in vitrectomized eyes. The purpose of this study was to evaluate the functional and anatomical effect of IVTA therapy in previously vitrectomized patients.

Materials and methods

We conducted a retrospective, observational, multicenter case-series study comprising patients who underwent IVTA injections after pars plana vitrectomy. Central Macular Thickness (CMT) measured with spectral-domain optical coherence tomography and best-corrected visual acuity (BCVA) in ETDRS letters were evaluated after each procedure. All relevant medical data were collected, including previous ophthalmologic treatments and comorbidities.

Results

Thirty pseudophakic eyes of 26 patients were enrolled in the study. The median patient age was 60.50 years (range, 40-81 years). All patients presented refractory macular edema (ME) and undertook at least one IVTA injection after pars plana vitrectomy. Median time between these two procedures was 14 months. Four subsets of patients were outlined according to the purpose underlying IVTA: 1) diabetic macular edema (n=20), 2) persistent ME after epiretinal membrane peeling (n=6), 3) residual ME after retinal detachment repair (n=3) and 4) post-traumatic ME (n=1). Overall mean pre and post-treatment CMT was $446.16 \pm 136 \mu\text{m}$ and $336.84 \pm 119 \mu\text{m}$, respectively, a difference that reached statistical significance ($p < 0.05$). Mean gain in BCVA letter score was 6.79 ± 12 letters after treatment ($p < 0.05$). Mean intraocular pressure significantly increased after IVTA (from 16.40 ± 2.48 mmHg at baseline to 19.32 ± 4.75 mmHg after IVTA, $p < 0.05$). This precluded us from continuing treatment in 5 eyes (16.6%). No other side effects possibly related to the drug and/or the procedure were observed.

Conclusion

Our results suggest that, despite prior vitrectomy, IVTA remains a valid therapeutic approach for eyes with persistent macular edema. A careful monitoring of intraocular pressure in these patients is, however, mandatory. A positive anatomical and functional effect was observed in our sample. Further prospective randomized studies with larger patient samples are needed to validate this conclusion.