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Service (sector) Retina and Vitreous N° CEP

Intravitreal Injection of Corticosteroids as Adjunctive Treatment of Diabetic Macular Edema

Nichard Unonius, Ingrid Ursula Scott, Harry W. Flynn Purpose: to evaluate the effectiveness of intraocular injection of triamcinolone as adjunctive treatment of macular edema in diabetic patients. Materials and Methods: 18 eyes of 15 patients underwent intraocular injection of triamcinolone acetonide to treat macular edema. In this consecutive series, all diabetic eyes received at least one prior session of laser photocoagulation, with minimum 3 months of follow up, in a grid pattern. The macular edema was accessed by clinical examination, by optical coherence tomography (OCT) and by fluorescein angiography (FA). Injections were performed under topical anesthesia with 4mg/0.1ml of triamcinolone acetonide into the vitreous cavity. All patients met the following criteria visual acuity between 20/40 and 20/400, increased macular thickness showed by OCT and/or capillary drop-out in the macula shown by fluorescein angiography, at least one session of laser treatment attempted without any noticeable effect in the diabetic patients, regular control of preexisting hyperlipidemia, hypertension or hyperglycemia. Evolution of the macular edema and change in visual acuity were studied during the follow-up period, with either fluorescein angiography and/or OCT being performed. The patients were followed for at least 3 months. Results: Mean visual acuity improved by 1.45, 1.85 and 1.9 Snellen lines at the 1-, 3and 6-month follow-up intervals, respectively. Baseline central macular thickness averaged 496mm for the 13 enrolled eyes when measured by OCT. Ten eyes evaluated at 1 month showed a reduction in macular thickness of 32% from 496mm to an average of 339mm. Four eyes evaluated by OCT at 3 months showed a reduction in macular thickness of 31.5% from 496mm to an average of 340mm. Six eyes completing 6 months of follow-up by OCT showed a reduction in macular thickness of 44% from 496mm to an average of 280mm. Three patients were reinjected. Conclusions: The improvement in visual acuity in the patients with anatomic success was sometimes modest, probably because these were end-stage eyes with permanent damage resulting from long-term edema. Injection of intravitreal triamcinolone appears to be a promising therapeutic method for macular edema in selected cases. Despite of the pattern of edema being diffuse or cystoid, the duration of the edema seems to be a crucial factor in predicting not only the anatomic, but also the visual outcomes.