

Intraindividual comparison of nepafenac 0.3% for the prevention of macular edema after phacoemulsification: Prospective placebo-controlled randomized study

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Purpose: To compare the anti-inflammatory efficacy of nepafenac 0.3% eye drops for prophylaxis of macular edema (ME) after small-incision cataract extraction.

Design: Randomized prospective intraindividual comparative study.

Methods: Both eyes of patients with bilateral age-related cataract were evaluated. Each patient was assigned randomly to receive a nepafenac 0.3% drops (Nevanac Uno, Alcon) in one eye (Nepafenac Group: Case) and a topical artificial tear substitute in the fellow eye (Placebo Group: Control). The primary outcome measure was the change in spectral-domain optical coherence tomography (SD-OCT) mean central subfield thickness (CST, μm) and total macular volume (TMV, mm^3) at 1 week, 5 and 12 weeks postoperatively compared between groups. The percentage of patients in both groups who demonstrated macular edema ($\geq 30\%$ increase from preoperative baseline in CST), and the best-corrected distance visual acuity (CDVA) within 5 and 12 weeks after cataract surgery were also compared between groups.

Results: Two hundred and six eyes of 103 patients were included in this study. In all retinal thickness measurements, a significant increase in both groups was detected starting from the postoperative first week until 12 weeks. At 5 weeks, there was a statistically significant difference in

CST and TMV between the nepafenac and control group ($P=0.024$ and $P=0.015$, respectively). At the 5th post-operative week, none of eyes in the nepafenac group and 4 (3.88%) eyes of the control group showed macula edema, Nonsteroidal antiinflammatory!2 highlighting a trend toward greater incidence in the control group. The between-group differences in visual outcomes were not statistically significant.

Conclusion: Used prophylactically after uneventful cataract surgery, nepafenac 0.3% was efficacious in reducing macular thickness compared to placebo after 5 weeks postoperatively, without difference in final visual acuity.

Keywords: Macular edema; cystoid macular edema; nonsteroidal anti-inflammatory agent; optical coherence tomography; phacoemulsification; nepafenac.

Speaker Biography

Clézio Soares Morato is a Medical Specialist in Ophthalmology. I was graduated from Ciências Médicas de Minas Gerais University – FCMMG (in Belo Horizonte, Minas Gerais, Brazil) and his Residency at the Base Hospital of the Federal District - Brasília – DF (Brazil).

Presently, I am member of the Brazilian Council of Ophthalmology. I am currently doing a Fellowship in Corneal and external disease section of the Ophthalmology Reference Centre (CEROF) in Goiania, Goiás, Brazil

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