Cataract Times

AN UPDATE ON CATARACT SURGERY

Topical bromfenac vs. flurbiprofen for inflammation and pain after cataract surgery

Therapy HEADLINES

(Source: Hebbar SK, Deepak P, Nalini GK, et al. A prospective evaluation of efficacy and safety of topical bromfenac 0.09% over topical flurbiprofen 0.03% after cataract surgery. Int J Basic Clin Pharmacol. 2019;8(2):234-39.)

After cataract surgery, hyperemia, pain, photophobia, & cystoid macular edema-induced diminished visual acuity can result from prostaglandins released through intraocular inflammation. Bromfenac 0.09% ophthalmic solution is a nonsteroidal anti-inflammatory drug formulation that has been approved by the US Food and Drug Administration for postoperative pain and inflammation. A prospective, single-center study conducted in Karnataka, India, included patients aged 40–90 years who underwent an uneventful cataract surgery with posterior chamber intraocular lens implantation; the patients were randomized to receive bromfenac 0.09% (n = 50) or flurbiprofen 0.03% (n = 50) topically from the first postoperative day onwards for six weeks. The treatment groups had comparable baseline characteristics.

- It was observed that reduction in inflammation (mean scores for aqueous cells, aqueous flare, and conjunctival and ciliary congestion), was significantly greater in the bromfenac group vs. the flurbiprofen group by Day 7 (Table 1).
- At the end of one week, a significantly higher number of patients treated with flurbiprofen vs. bromfenac demonstrated, mild conjunctival congestion (34% vs. 4%), and mild ciliary congestion (10% vs. 0%).
- Significantly lower mean pain score and a significantly higher number of patients who became pain-free on Day 7 (86% vs. 22%; p <0.0001) was noted with bromfenac vs. flurbiprofen.
- No significant differences were noted in the inflammation and pain outcomes with the two treatments during the subsequent weeks.
- The two drugs had a comparable safety profile, with no reports of any serious adverse effects.

Table 1: Mean inflammation scores

Parameter	Inflammation scores (Mean ± SD)*				p-value#
	Bromfenac		Flurbiprofen		
	Day 1	Day 7	Day 1	Day 7	
Aqueous cells	1.34 ± 0.52	0	1.48 ± 0.65	0.24 ± 0.43	0.0001
Aqueous flare	1.34 ± 0.52	0	1.46 ± 0.65	0.08 ± 0.27	0.0416
Corneal edema	0.72 ± 0.64	0	0.82 ± 0.69	0	
Conjunctival congestion	1.4 ± 0.53	0.04 ± 0.19	1.5 ± 0.54	0.34 ± 0.47	0.000086
Ciliary congestion	1.34 ± 0.55	0	1.48 ± 0.54	0.1 ± 0.30	0.0216

*Grading of inflammation was done using a four-point scale ranging from 0–3. #For Day 7 values. SD: Standard deviation.

Compared to flurbiprofen 0.03%, topical therapy with bromfenac 0.09% led to an earlier alleviation of anterior chamber inflammation and pain after cataract surgery.