

1. Summary

Purpose

The purpose of this study is to assess the efficacy of topical Non-Steroidal Anti-inflammatory Drugs (NSAID) in comparison to topical steroids following uncomplicated cataract surgery. Topical steroids are widely used for a long period due to their strong anti-inflammatory effect albeit their certain unwanted side effects. NSAID topical eye drops, in comparison, have a less pronounced anti-inflammatory effect with relatively low side effects. This study targeted the patients who had uncomplicated cataract surgeries with minimal inflammatory reaction. The NSAIDs have quite a simple, easy-to-follow dosage regimen for the patient.

Patients and method

This prospective study included 220 patients with uncomplicated cataracts. The patients were randomly assigned to two groups: the steroid group and the NSAID group. They underwent phacoemulsification cataract surgery in the same setting, with foldable posterior chamber intraocular lens implantation. All patients were subjected to preoperative and postoperative relevant examination and investigations.

Results

- No statistically significant difference was found between both groups in visual acuity assessment (100 percent 6/6-6/9 best-corrected visual acuity gain in each group at 4 weeks). The anterior chamber inflammatory reaction measured as anterior chamber cells and flare also did not show any statistically significant difference ($P>0.05$) between the two groups but the anti-inflammatory effect of NSAID was found to be slower.
- The intraocular pressure of the steroid group showed a statistically significant increase ($P<0.05$) compared to the NSAID group. This proves the safety value of using NSAIDs which is in our interest.
- There was a statistically significant increase ($P<0.05$) in the macular thickness in the steroid group at 4 weeks compared to the NSAID group at 4 weeks. This again indicates the possibility of cystoid macular edema in the steroid group compared to NSAIDs. The NSAIDs appear to be safe in this respect too.

Conclusion

1. Both drugs have comparable efficacy and safety in preventing post-operative inflammation after uncomplicated cataract surgery.
2. The anti-inflammatory effect of NSAIDs is found to be relatively slower than steroids.
3. However, the patients who used topical steroids were more prone to develop intraocular pressure rise and cystoid macular edema. In these aspects, NSAIDs are shown to be safer.

Keywords

Cataract, phacoemulsification, cystoid macular edema, flare, cells, inflammation, steroids, NSAID