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Drug Class Literature Scan: Ophthalmic, Anti-inflammatory Drugs

Date of Review: August 2026

Literature Search: 1/1/1946 – 5/6/2026
Date of Last Review: May 2015

Current Status of PDL Class:
See **Appendix 1**.

Plain Language Summary:

- This document scanned studies published since 2015 that looked at the safety and effectiveness of eye drops used to treat uveitis or conjunctivitis. Symptoms of these eye conditions include sensitivity to light, redness, pain, and swelling or irritation (inflammation) of the eye.
- Uveitis can be caused by an infection or trauma to the eye. Some types of uveitis are caused by a chronic disease such as rheumatoid arthritis, psoriatic arthritis, or inflammatory bowel disease. Treatment of uveitis involves using steroid eye drops such as prednisolone or dexamethasone to relieve the pain and swelling.
- Conjunctivitis is most commonly caused by a bacterial or viral infection but can also caused by allergens (pollen, dust) or chemical irritants. A nonsteroidal anti-inflammatory drug (NSAID) eye drop such as ketorolac may be used to treat conjunctivitis caused by allergens.
- After cataract surgery, a steroid or NSAID eye drop (ketorolac, nepafenac, bromfenac) is often prescribed to manage post-operative inflammation and pain. These eye drops should be used for up to 2 weeks after surgery. If used for longer than that, corticosteroid eye drops can increase the intraocular pressure in the eye, which can impair vision.
- No differences in the safety or effectiveness have been found between the different steroid eye drops or NSAID eye drops when used to treat these conditions.
- Oregon Health Plan (OHP) provides coverage for steroid and NSAID eye drops on the Preferred Drug List.

Conclusions:

- Four new high-quality systematic reviews have been published evaluating the safety and efficacy ophthalmic corticosteroids and NSAID preparations after cataract surgery.[1-4] One new high-quality guideline was published which addressed the use of corticosteroid and NSAID ophthalmic drops in management of juvenile idiopathic arthritis associated-uveitis and idiopathic chronic anterior uveitis.[5]
- A 2024 systematic review assessed the efficacy and safety of standard (prednisolone acetate 1% or dexamethasone 0.1%) versus soft (fluorometholone 0.1% or loteprednol etabonate 0.5%) ophthalmic corticosteroid drops for postoperative management of cataract surgery-induced inflammation.[1] The review found moderate-quality evidence that both groups of ophthalmic steroids produce comparable efficacy on anterior chamber inflammation and intraocular pressure (IOP).[1]
- A 2024 systematic review evaluated the safety and efficacy of NSAIDs and corticosteroids for postoperative management of cataract surgery.[2] Pertinent endpoints included visual acuity, macular thickness, and macular edema.[2] Nineteen studies provided moderate-quality evidence that NSAIDs or a combination of NSAIDs and corticosteroids are more efficacious and safer than corticosteroids alone for post-operative management of cataract surgery.[2]

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- A 2018 systematic review evaluated the comparative safety and efficacy of prednisolone acetate and difluprednate to control inflammation after cataract surgery.[3] No statistically significant difference in efficacy between the two agents was found at 1 month based on moderate-quality evidence.[3] Low-to-moderate quality evidence showed that both drugs are safe for controlling inflammation after cataract surgery.[3]
- A 2016 Cochrane review assessed whether prophylactic ophthalmic NSAIDs, either in addition to or instead of, ophthalmic corticosteroids reduce the incidence of macular edema and associated visual morbidity postoperatively.[4] Prophylactic ophthalmic NSAIDs may reduce the risk of developing macular edema after cataract surgery, but there is insufficient evidence prophylactic use improves visual acuity and quality of life.[4]
- The American College of Rheumatology updated recommendations for the treatment of juvenile idiopathic arthritis–associated uveitis and idiopathic chronic anterior uveitis in 2023. Two recommendations include guidance for the use of ophthalmic anti-inflammatory agents based on very-low quality evidence:
    - Ophthalmic corticosteroids like prednisolone acetate 1% or dexamethasone 0.1% are the first-line treatment for juvenile idiopathic arthritis-associated uveitis and chronic anterior uveitis, based on expert opinion and very low-quality of evidence.[5]
    - Ophthalmic and systemic NSAIDs have no demonstrable effect as monotherapy for juvenile idiopathic arthritis-associated uveitis and chronic anterior uveitis, based on descriptive studies providing very low-quality evidence.[5]
- Since 2015, FDA has approved 3 corticosteroid ophthalmic formulations for the treatment of post-operative inflammation and pain following ocular surgery:
    - 3/2024: BYQLOVI (clobetasol) 0.05% ophthalmic suspension;[6]
    - 2/2019: LOTEMAX SM (loteprednol) 0.38% ophthalmic gel;[7] and
    - 8/2018: INVELTY (loteprednol) 1% ophthalmic suspension.[8]
- A summary of FDA safety labeling updates for anti-inflammatory ophthalmic agents is presented in **Table 2**.

Recommendations:

- Maintain BYQLOVI (clobetasol) 0.05%, LOTEMAX SM (loteprednol) 0.38%, and INVELTY (loteprednol) 1% ophthalmic preparations as non-preferred on the Oregon Health Plan's fee-for-service Practitioner-Managed Prescription Drug Plan.
- Evaluate drug costs in executive session.

Summary of Prior Reviews and Current Policy

- The Pharmacy and Therapeutics Committee last reviewed the ophthalmic anti-inflammatory drugs at the May 2015 meeting.
- There is high quality evidence that there is no difference in efficacy or safety between ophthalmic corticosteroid agents or ophthalmic NSAIDs.
- The Committee agreed to make at least one medication from the corticosteroid and NSAID drug class preferred on the PDL (see **Appendix 1**).

Methods:

A Medline literature search for new systematic reviews and randomized controlled trials (RCTs) assessing clinically relevant outcomes to active controls, or placebo if needed, was conducted. The Medline search strategy used for this literature scan is available in **Appendix 3**, which includes dates, search terms and limits used. The OHSU Drug Effectiveness Review Project, Agency for Healthcare Research and Quality (AHRQ), National Institute for Health and Clinical Excellence (NICE), Department of Veterans Affairs, the Scottish Intercollegiate Guidelines Network (SIGN), and the Canada's Drug Agency (CDA-AMA) resources were manually searched for high quality and relevant systematic reviews. When necessary, systematic reviews are critically appraised for quality using the AMSTAR tool and clinical practice guidelines using the AGREE tool. The FDA website was searched for new drug approvals, indications, and pertinent safety alerts.

The primary focus of the evidence is on high quality systematic reviews and evidence-based guidelines. Randomized controlled trials will be emphasized if evidence is lacking or insufficient from those preferred sources.

New Systematic Reviews:

The Efficacy and Safety of Standard versus Soft Topical Steroids after Cataract Surgery (2024)

A 2024 systematic review assessed the efficacy and safety of standard (prednisolone acetate 1% or dexamethasone 0.1%) versus soft (fluorometholone 0.1% or loteprednol etabonate 0.5%) topical steroidal drops in the postoperative management of cataract surgery-induced inflammation.[1]

A literature search was conducted reviewing all available published clinical studies up to May 8, 2023.[1] Seven eligible publications from 1997 through 2020 met inclusion criteria, describing treatment of 593 eyes in 593 patients who underwent uncomplicated cataract surgery.[1] Four studies (57%) used fluorometholone 0.1% as the soft steroid, and 4 studies used prednisolone acetate 1% as the standard steroid.[1] Treatment regimens were similar between the arms within each study, but varied between the different studies.[1] Only 3 studies (43%) had a low risk of bias.[1]

Except for a significantly lower grade of anterior chamber flare in the standard steroid group at day 7 (standardized mean difference, 0.26; 95% confidence interval [CI], 0.05 to 0.47; $I^2 = 0\%$), inflammatory activity measurements did not differ at days 1 and 28 after surgery.[1] Pooled analysis of IOP demonstrated a higher IOP at the 7-day visit in the standard steroid group, whereas IOP at other time points (Day 1 and 28) was comparable among the groups.[1] Qualitative analysis of ocular adverse events showed similarities among the groups.[1] These findings, based upon moderate-quality evidene, suggest that both groups of ophthalmic steroids produce comparable efficacy on anterior chamber inflammation and postoperative IOP.[1]

NSAIDs and Corticosteroids for the Postoperative Management of Age-Related Cataract Surgery (2024)

This systematic review evaluated the safety and efficacy of NSAIDs and corticosteroids in the postoperative management of cataract surgery for age-related cataracts in adults.[2] Pertinent endpoints included visual acuity, macular thickness, and macular edema.[2] A total of 19 studies were included, with 3473 patients (3638 eyes) treated following cataract surgery with NSAIDs (n = 1479), corticosteroids (n = 1307), or a combination of the two (n = 687).[2] All included studies were judged to be of moderate quality, with exposure and outcome adequately ascertained.[2] The lengths of follow-up were adequate to manifest a change in clinical outcomes.[2]

Combination treatment demonstrated favorable best-corrected visual acuity compared to corticosteroids 4 to 6 weeks postoperatively (mean difference [MD] = –0.01 logarithm of the minimum angle of resolution [logMAR], 95% CI: –0.02 to –0.01, $I^2 = 0\%$).[2] The pooled estimate of 1 day (MD = 0.01 logMAR, 95% CI = –0.04, 0.05, $I^2 = 0\%$), 7 days (MD = –0.01 logMAR, 95% CI = –0.04, 0.02, $I^2 = 4\%$), 14 days (MD = 0.02 logMAR, 95% CI = –0.01, 0.05, $I^2 = 0\%$), and 4 to 6 weeks (MD = –0.01 logMAR, 95% CI = –0.03, 0.00, $I^2 = 0\%$) postoperatively showed comparable visual acuity between corticosteroids and NSAIDs groups.[2] NSAIDs had more favorable flare values than corticosteroids on day 7 (MD = –9.17 photons/ms, 95% CI = –16.52 to –1.82, $I^2 = 94\%$), day 14 (MD = –5.23 photons/ms, 95% CI = –8.35 to –2.11, $I^2 = 94\%$), and 4 to 6 weeks (MD = –1.62 photons/ms, 95% CI = –3.03 to –0.20, $I^2 = 93\%$) postoperatively.[2] Furthermore, 4 to 8 weeks postoperatively, patients treated with NSAIDs showed lower central macular thickness (MD = –13.26 µm, 95% CI = –18.66 to –7.86, $I^2 = 81\%$) compared to those treated with corticosteroids.[2] NSAIDs and combination treatment were associated with a lower incidence of central macular edema (odds ratio [OR] = 0.16, 95% CI = 0.07 to 0.35, $I^2 = 61\%$; OR = 0.21, 95% CI = 0.10 to 0.45, $I^2 = 31\%$) than corticosteroids 4 to 8 weeks postoperatively.[2] The authors concluded that based upon moderate-quality evidence, NSAIDs and combination treatment could be more efficacious and safer alternatives to corticosteroids alone in the postoperative management of cataract surgery.[2]

Difluprednate versus Prednisolone Acetate after Cataract Surgery (2018)

For this 2018 systematic review, literature was searched through July 2019. Six RCTs met inclusion criteria with 883 patients: 441 received difluprednate and 442 received prednisolone acetate after cataract surgery.[3] The evidence quality was graded as moderate for corneal edema and intraocular pressure and low for anterior chamber clearance.[3]

After small incision cataract surgery, difluprednate was superior in clearing anterior chamber cells at 1 week (OR=2.5; p>0.00001) and at 2 weeks (OR=2.5; p=0.04), as well as clearing the anterior chamber flare at 2 weeks (OR=6.7; p=0.04).[3] After phacoemulsification, difluprednate was superior in terms of corneal clarity at 1 day (OR=2.6; p=0.02) and 1 week after surgery (OR=1.96; p=0.0007).[3] No statistically significant difference in efficacy was detected between both agents at 1 month.[3] Both agents were safe as evaluated by the ocular hypertension (OR=1.23; p=0.8).[3] With low-to-moderate certainty evidence, difluprednate and prednisolone acetate are safe agents for controlling the inflammation after cataract surgery.[3]

Prophylactic Non-Steroidal Anti-Inflammatory Drugs for the Prevention of Macular Edema After Cataract Surgery (2016)

A 2016 Cochrane review assessed whether prophylactic ophthalmic NSAIDs either in addition to or instead of, ophthalmic corticosteroids reduce the incidence of macular edema and associated visual morbidity postoperatively.[4] Literature was searched through September 2, 2016.[4]

Thirty-four studies met inclusion criteria.[4] Over 5000 people were randomized in these trials.[4] The majority of studies enrolled one eye per participant; a small subset (4 trials) enrolled a proportion of people with bilateral surgery.[4] Twenty-eight studies compared NSAIDs plus corticosteroids with corticosteroids alone, and 6 studies compared NSAIDs with corticosteroids.[4] A variety of NSAIDs were used, including ketorolac, diclofenac, nepafenac, indomethacin, bromfenac, flurbiprofen and pranopfen.[4] Follow-up ranged from one to 12 months.[4] None of the studies were judged to be at low risk of bias in all domains.[4] Six studies were funded by industry, seven studies were funded from non-industry sources, and the rest of the studies did not report the source of funding.[4]

There was low-certainty evidence that ophthalmic NSAIDs in combination with corticosteroid may lower risk of poor vision due to macular edema at 3 months after cataract surgery compared to corticosteroids alone (risk ratio (RR) 0.41, 95% CI 0.23 to 0.76; eyes = 1360; studies = 5; I^2 = 5%).[4] There was low-quality evidence of reduced risk of macular edema with NSAIDs alone at 3 months after surgery (RR 0.40, 95% CI 0.32 to 0.49; eyes = 3638; studies = 21).[4]

There was inconsistent evidence on central retinal thickness at 3 months (I^2 = 87%), as results ranged from -30.9 micron (µm) in favor of NSAIDs plus corticosteroids to +7.44 µm in favor of corticosteroids alone.[4] Data on best corrected visual acuity (BCVA) were inconsistent, but nine out of 10 trials reporting this outcome found between-group differences (NSAIDs plus steroids versus steroids alone) in visual acuity of less than 0.1 logMAR.[4]

None of the six studies comparing NSAIDs alone with corticosteroids reported on poor vision due to macular edema at 3 or 12 months.[4] There was low-certainty evidence that central retinal thickness was lower in the NSAIDs group at 3 months (MD -22.64 µm, 95% CI -38.86 to -6.43; eyes = 121; studies = 2) compared to corticosteroids.[4] Five studies reported on macular edema and showed a reduced risk with NSAIDs compared to corticosteroids, based on low-quality evidence (RR 0.27, 95% CI 0.18 to 0.41; eyes = 520).[4] Three studies reported BCVA at 3 months, but results were inconsistent, though all 3 studies found differences of less than 0.1 logMAR between NSAIDs and corticosteroids.[4]

The authors concluded that ophthalmic NSAIDs may reduce the risk of developing macular edema after cataract surgery, but the extent to which the reduction observed has an impact on the visual function and quality of life is uncertain.[4] The value of adding topical NSAIDs to steroids, or using them as an alternative to

topical steroids, with a view to reducing the risk of poor visual outcome after cataract surgery is therefore uncertain, as there is insufficient evidence to suggest any important effect on vision after surgery between the 2 groups studied.[4]

Eight systematic reviews were excluded due to poorer quality, wrong study design of included trials (e.g., observational), comparator (e.g., no control or placebo-controlled), or outcome studied (e.g., non-clinical).[9-16]

New Guidelines:

American College of Rheumatology: New and Updated Recommendations for the Treatment of Juvenile Idiopathic Arthritis–Associated Uveitis and Idiopathic Chronic Anterior Uveitis (2023)

- Topical glucocorticoids (usually prednisolone acetate 1% or dexamethasone 0.1%) are recommended as first-line treatment for juvenile idiopathic arthritis-associated uveitis and chronic anterior uveitis, based on expert opinion and very low-quality evidence.[5]
- Topical and systemic NSAIDs are not recommended as monotherapy for juvenile idiopathic arthritis-associated uveitis and chronic anterior uveitis due to lack of demonstrable effect, based on descriptive studies and very low-quality evidence.[5]

Two identified guidelines were excluded due to poorer quality.[17,18]

New Formulations:

- 3/2024: BYQLOVI (clobetasol) 0.05% ophthalmic suspension received FDA approval for the treatment of post-operative inflammation and pain following ocular surgery.[6] The recommended dose is one drop instilled into the affected eye twice daily beginning the day after surgery and continuing throughout the first 2 weeks of the post-operative period.[6] Due to the risk of increased IOP and possible damage to the optic nerve, IOP should be monitored if this product is used for 10 days or longer.[6] This is the first clobetasol ophthalmic preparation approved by the FDA.

  Clinical efficacy was evaluated in 2 RCTs in which patients with 10 or more white blood cells (an indicator of inflammation) in the anterior chamber after cataract surgery were assigned to clobetasol or placebo.[6] One drop of clobetasol or placebo was self-administered twice a day for 14 days, beginning on the day after surgery.[6] The co-primary endpoints were complete resolution of inflammation (an anterior chamber white blood cell count of 0 maintained through Day 15 without rescue medication) and complete resolution of pain (a patient-reported pain grade of 0 maintained through Day 15 without rescue medication) assessed at post-operative day 8 and 15.[6] In the intent-to-treat analysis, both co-primary efficacy endpoints were statistically significantly better in clobetasol-treated patients compared to placebo-treated patients.[6] Results from both trials are presented in **Table 1**.[6] Ocular adverse reactions observed with clobetasol 0.05% included eye inflammation (2%), corneal edema (2%), anterior chamber inflammation (2%), cystoid macular edema (2%), intraocular pressure elevation (1%), photophobia (1%) and vitreous detachment (1%).[6] Many of these reactions may have been a consequence of the surgical procedure.[6]

Table 1. Co-Primary Endpoints for Clobetasol 0.05% Ophthalmic Suspension Versus Placebo.[6]

Treatment Arm	Study 1: Day 8	Study 1: Day 15	Study 2: Day 8	Study 2: Day 15
Percent of Patients with Anterior Cell Count = 0				
Clobetasol 0.05%	32.6%	58.6%	29.7%	57.8%
Placebo	11.7%	15.7%	13.0%	18.9%

Percent of Patients with Complete Pain Resolution				
Clobetasol 0.05%	82.3%	90.6%	87.0%	86.5%
Placebo	42.6%	42.1%	46.5%	40.7%
Differences were significant (p<0.01) for all outcomes				

- 2/2019: LOTEMAX SM (loteprednol) 0.38% ophthalmic gel formulation received FDA approval for the treatment of post-operative inflammation and pain following ocular surgery.[7] The recommended dose is one drop into the affected eye three times daily beginning the day after surgery and continuing throughout the first 2 weeks of the post-operative period.[7] If this product is used for 10 days or longer, IOP should be monitored due to the risk of increased IOP and possible damage to the optic nerve.[7] Loteprednol is available as a brand-name product from 5 other manufacturers in strengths ranging from 0.2% to 0.5%, and generic formulations of loteprednol in a variety of strengths are also FDA-approved.

  In two RCTs in patients who underwent cataract extraction with intraocular lens implantation, loteprednol 0.38% gel was administered three times daily to the affected eye beginning the day after cataract surgery and compared to patients who received placebo three times a day post-operatively.[7] In these trials, loteprednol was more efficacious compared to placebo in resolving anterior chamber inflammation and pain following surgery.[7] Loteprednol-treated patients had statistically significantly higher rates of complete clearing of anterior chamber cells than placebo (Study 1: 29% vs. 9%; MD 11%; 95% CI, 11 to 27%; and Study 2: 31% vs. 20%, MD 10%; 95% CI, 2 to 19%).[7] In addition, more loteprednol-treated patients were pain-free at post-operative Day 8 compared to placebo (Study 1: 73% vs. 48%; MD 25%; 95% CI, 15 to 35%; and Study 2: 76% vs. 50%; MD 26%; 95% CI; 17 to 35%).[7] Adverse reactions associated with ophthalmic steroids include elevated intraocular pressure, which may be associated with infrequent optic nerve damage, visual acuity and field defects, posterior subcapsular cataract formation, delayed wound healing and secondary ocular infection from pathogens including herpes simplex, and perforation of the globe where there is thinning of the cornea or sclera.[7] In these studies there were no treatment-emergent adverse drug reactions that occurred in more than 1% of subjects in the three times daily group compared to vehicle.[7]

- 8/2018: INVELTY (loteprednol) 1% ophthalmic suspension received FDAL approval for the treatment of post-operative inflammation and pain following ocular surgery.[8] The recommended dose is 1-2 drops into the affected eye twice daily beginning the day after surgery and continuing throughout the first 2 weeks of the post-operative period.[8]

  Clinical efficacy and safety of loteprednol 1% were evaluated in 2 RCTs in which patients with an anterior cell grade greater than or equal to "2" (a cell count of 6 or higher using a slit-lamp biomicroscope) after cataract surgery were assigned to loteprednol or placebo following surgery.[8] One to 2 drops of loteprednol or vehicle were self-administered twice a day for 14 days, beginning the day after surgery.[8] Complete resolution of inflammation (a cell count of 0 maintained through day 15 without rescue medication) and complete resolution of pain (a patient-reported pain grade of 0 maintained through day 15 without rescue medication) were assessed 8 and 15 days post-surgery.[8] In the intent-to-treat analysis of both studies, a statistically significant benefit was seen in the loteprednol-treated group compared to placebo for complete resolution of ocular inflammation at Day 8 (24% vs. 13%; p<0.01) and Day 15 (50% vs. 27%; p<0.01), and complete resolution of pain at Day 8 (56% vs. 36%; p<0.01) and Day 15 (69% vs. 48%; p<0.01).[8] The most common adverse drug reactions observed with loteprednol 1% ophthalmic suspension were eye pain and posterior capsular opacification, both reported in 1% of patients.[8] These reactions may have been the consequence of the surgical procedure.[8]

New FDA Safety Alerts:

Table 2. Description of New FDA Safety Alerts[19]

Generic Name	Brand Name	Month / Year of Change	Location of Change (Boxed Warning, Warnings, CI)	Addition or Change and Mitigation Principles (if applicable)
Difluprednate	DUREZOL	7/2025	Warnings and Precautions	**Corneal and Scleral Melting** Various ocular diseases and long-term use of topical corticosteroids have been known to cause corneal and scleral thinning. Use of topical corticosteroids in the presence of thin corneal or scleral tissue may lead to perforation of the globe.
Dexamethasone/ Tobramycin	TOBRADEX	4/2020	Warnings and Precautions	**Warnings:** Sensitivity to topically applied aminoglycosides may occur in some patients. Severity of hypersensitivity reactions may vary from local effects to generalized reactions such erythema, itching, urticaria, skin rash, anaphylaxis, anaphylactoid reactions, or bullous reactions. If a sensitivity reaction does occur, discontinue use.

References:

1. Noyman DBE, Chan CC, Mimouni M, Safir M. The Efficacy and Safety of Standard versus Soft Topical Steroids after Cataract Surgery: A Systematic Review and Meta-analysis. *Ophthalmology*. 131(5):595-610. doi:https://dx.doi.org/10.1016/j.ophtha.2023.11.022
2. Haddad JE, Sabbakh NA, Macaron MM, et al. NSAIDs and Corticosteroids for the Postoperative Management of Age-Related Cataract Surgery: A Systematic Review and Meta-analysis. *Am J Ophthalmol*. 260:1-13. doi:https://dx.doi.org/10.1016/j.ajo.2023.09.027
3. KhalafAllah MT, Basiony A, Salama A. Difluprednate versus Prednisolone Acetate after Cataract Surgery: a Systematic Review and Meta-Analysis. *BMJ Open*. 9(11):e026752.
4. Lim BX, Lim CH, Lim DK, Evans JR, Bunce C, Wormald R. Prophylactic non-steroidal anti-inflammatory drugs for the prevention of macular oedema after cataract surgery. *Cochrane Database of Systematic Reviews*. 11:CD006683.
5. Foeldvari I, Maccora I, Petrushkin H, et al. New and Updated Recommendations for the Treatment of Juvenile Idiopathic Arthritis-Associated Uveitis and Idiopathic Chronic Anterior Uveitis. *Arthritis Care Res (Hoboken)*. May 2023;75(5):975-982. doi:10.1002/acr.24963
6. BYQLOVI (clobetasol) 0.05% opthalmic suspension/drops. Prescribing Information. Taipei, Taiwa; Formoas Pharmaceuticals, Inc. 3/2024.
7. LOTEMAX SM (loteprednol) opthalmic 0.38% gel. Prescribing Information. Bridgewater, NJ; Bauch and Lomb, a division of Valeant Pharmaceuticals. 2/2019.
8. INVELTYS (loteprednol) 1% opthalmic suspension. Prescribing Information. Waltham, MA; Kala Pharmaceuticals, Inc. 8/2018.
9. Liu SH, Hawkins BS, Ng SM, et al. Topical pharmacologic interventions versus placebo for epidemic keratoconjunctivitis. *Cochrane Database of Systematic Reviews*. 3:CD013520. doi:https://dx.doi.org/10.1002/14651858.CD013520.pub2
10. Almasri M, Ghareeb A, Ismaiel A, Leucuta DC, Nicoara SD. Nepafenac role in macular swelling prevention and in visual outcome after cataract surgery - a systematic review and meta-analysis. *Eur J Ophthalmol*. 35(4):1421-1431. doi:https://dx.doi.org/10.1177/11206721251317652

11. Elettreby AM, Alsaied MA, Saleh MM, et al. Efficacy and Safety of Loteprednol Etabonate in Managing Pain and Inflammation After Cataract Surgery: A Systematic Review and Meta-analysis. *Eye & Contact Lens: Science & Clinical Practice*. 51(11):481-490.
12. Zeid MA, Elrosasy A, Khalefa K, et al. Optimizing pain management and pupil dilation in cataract surgery: a systematic review and meta-analysis of phenylephrine/ketorolac (OMIDRIA R). *Graefes Arch Clin Exp Ophthalmol*. 263(8):2265-2275.
13. Duan P, Liu Y, Li J. The comparative efficacy and safety of topical non-steroidal anti-inflammatory drugs for the treatment of anterior chamber inflammation after cataract surgery: a systematic review and network meta-analysis. *Graefes Arch Clin Exp Ophthalmol*. 255(4):639-649.
14. Almasri M, Ismaiel A, Gavris I, Leucuta DC, Gavris MM, Nicoara SD. Topical NSAIDs impact on macular oedema and visual outcome after phacoemulsification: systematic review of RCTs with network meta-analysis. *Eye (Lond)*. Dec 2024;38(17):3222-3230. doi:10.1038/s41433-024-03268-x
15. Musleh MG, Bokre D, Dahlmann-Noor AH. Risk of intraocular pressure elevation after topical steroids in children and adults: A systematic review. *Eur J Ophthalmol*. Sep 2020;30(5):856-866. doi:10.1177/1120672119885050
16. Aptel F, Colin C, Kaderli S, et al. Management of postoperative inflammation after cataract and complex ocular surgeries: a systematic review and Delphi survey. Systematic Review. *Br J Ophthalmol*. 101(11):1-10.
17. El-Ghobashy N, El-Garf A, Mohamed Youssef M, et al. Egyptian Consensus Guidance for Treatment of Adults with Non-Infectious Uveitis. *Ocular Immunology & Inflammation*. 33(7):1313-1318. doi:https://dx.doi.org/10.1080/09273948.2025.2493362
18. Leal I, Miranda V, Fonseca C, et al. The 2021 Portuguese Society of Ophthalmology joint guidelines with Paediatric Rheumatology on the screening, monitoring and medical treatment of juvenile idiopathic arthritis-associated uveitis. *ARP Rheumatol*. Jan-Mar 2022;1(1):49-62. The 2021 Portuguese Society of Ophthalmology joint guidelines with Paediatric Rheumatology on the screening, monitoring and medical treatment of juvenile idiopathic arthritis-associated uveitis.
19. Food and Drug Administration. Drug Safety Labeling Changes (SLC). https://www.accessdata.fda.gov/scripts/cder/safetylabelingchanges/. Accessed May 6, 2026.

Appendix 1: Current Preferred Drug List

Generic	Brand	Form	PDL
dexamethasone	MAXIDEX	DROPS SUSP	Y
dexamethasone sodium phosphate	DEXAMETHASONE SODIUM PHOSPHATE	DROPS	Y
diclofenac sodium	DICLOFENAC SODIUM	DROPS	Y
fluorometholone	FLUOROMETHOLONE	DROPS SUSP	Y
fluorometholone	FML	DROPS SUSP	Y
flurbiprofen sodium	FLURBIPROFEN SODIUM	DROPS	Y
ketorolac tromethamine	ACULAR	DROPS	Y
ketorolac tromethamine	ACULAR LS	DROPS	Y
ketorolac tromethamine	KETOROLAC TROMETHAMINE	DROPS	Y
loteprednol etabonate	LOTEMAX	DROPS SUSP	Y
loteprednol etabonate	LOTEPREDNOL ETABONATE	DROPS SUSP	Y
prednisolone acetate	PRED FORTE	DROPS SUSP	Y
prednisolone acetate	PREDNISOLONE ACETATE	DROPS SUSP	Y
bromfenac sodium	BROMFENAC SODIUM	DROPS	N
bromfenac sodium	BROMSITE	DROPS	N
bromfenac sodium	PROLENSA	DROPS	N

clobetasol propionate	BYQLOVI	DROPS SUSP	N
difluprednate	DIFLUPREDNATE	DROPS	N
difluprednate	DUREZOL	DROPS	N
fluorometholone	FML FORTE	DROPS SUSP	N
fluorometholone acetate	FLAREX	DROPS SUSP	N
ketorolac tromethamine/PF	ACUVAIL	DROPERETTE	N
loteprednol etabonate	LOTEMAX	DROPS GEL	N
loteprednol etabonate	LOTEMAX SM	DROPS GEL	N
loteprednol etabonate	LOTEPREDNOL ETABONATE	DROPS GEL	N
loteprednol etabonate	ALREX	DROPS SUSP	N
loteprednol etabonate	INVELTYS	DROPS SUSP	N
loteprednol etabonate	LOTEPREDNOL ETABONATE	DROPS SUSP	N
loteprednol etabonate	LOTEMAX	OINT. (G)	N
nepafenac	ILEVRO	DROPS SUSP	N
nepafenac	NEVANAC	DROPS SUSP	N
prednisolone acetate	PRED MILD	DROPS SUSP	N
prednisolone sodium phosphate	PREDNISOLONE SODIUM PHOSPHATE	DROPS	N

Appendix 2: New Comparative Clinical Trials

A total of 98 citations were manually reviewed from the initial literature search. All citations were excluded because of inappropriate study design (e.g., observational), comparator control (e.g., no control or placebo-controlled), or endpoints studied (e.g., non-clinical).

Appendix 3: Medline Search Strategy
Ovid MEDLINE(R) ALL <1946 to May 06, 2026>

1	Dexamethasone/	58656
2	Diclofenac/	9482
3	Fluorometholone/	364
4	Flurbiprofen/	2087
5	Ketorolac/	1873
6	Loteprednol Etabonate/	167
7	Prednisolone/	35195
8	Bromobenzenes/ or Benzophenones/ or Ophthalmic Solutions/ or bromfenac.mp. or Anti-Inflammatory Agents, Non-Steroidal/	98041
9	Clobetasol/	1610
10	difluprednate.mp. or Ophthalmic Solutions/ or Fluprednisolone/ or Glucocorticoids/	91935
11	Benzeneacetamides/ or Anti-Inflammatory Agents, Non-Steroidal/ or nepafenac.mp. or Phenylacetates/	83388

12	1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11	259518
13	Uveitis/	14716
14	Conjunctivitis/	6750
15	Cataract Extraction/	27660
16	13 or 14 or 15	48448
17	12 and 16	2873
18	limit 17 to (english language and humans and yr="2015 -Current")	795
19	limit 18 to (comparative study or guideline or practice guideline or "systematic review")	98

Appendix 4: Key Inclusion Criteria

Population	People with uveitis or post-operative cataract extraction
Intervention	Ophthalmic drops in Appendix 1
Comparator	Another ophthalmic drop in Appendix 1
Outcomes	Anterior chamber flare, corneal edema, increased intraocular pressure
Timing	Up to 14 days post-operatively
Setting	Outpatient