

Allergic Eye Disease

UPMC | CHILDREN'S
HOSPITAL OF PITTSBURGH

CLINICAL EFFECTIVENESS GUIDELINE

History (Itching, watering, discharge, photophobia, nasal symptoms, asthma, hay fever, dermatitis), duration of symptoms (constant or intermittent), full ophthalmic exam including visual acuity and refraction (Scissor reflex for early keratoconus), IOP for every child on steroids¹⁻⁸

Photographic documentation whenever possible

Slit lamp examination:
Lids: Skin, eyelid thickening or tightening, loss of lashes, other signs of blepharitis
Conjunctiva: Congestion, chemosis, Papillae (size), scarring, follicles, forniceal shortening
Limbus: Tranta's dots, Limbitis
Cornea: signs of early keratoconus
Refraction: astigmatism
Oil droplet reflex
Lens: Cataract
If ATOPIC exclude retinal detachment

Skin condition
Eczema, dermatitis +

Rhinitis +, Asthma +

Dermatology consult (Topical Tacrolimus 0.03% ointment)

ENT, Allergy, and Immunology consult

Treatment
In all cases: avoidance of allergen, cool compresses, preservative free artificial tears
If extra ocular symptoms: remember to start oral antihistamines¹⁻⁸

If seasonal symptoms a/c history

Mild symptoms No signs/Minimal signs

Ketotifen Fumarate 0.025% QID [Zaditor/Alaway]
Lodoxamide 0.1% (Alomide) QID (If the child needs Lubrication)
OR
Olopatadine hydrochloride BID (Patanol 0.1% / Pataday 0.2%)

Mild Persistent or Moderate Symptoms

- Moderate to severe tarsal disease (small size 0.3 mm papillae)
- Tranta's dots or limbitis
- No corneal involvement

1. Olopatadine hydrochloride BID (Patanol 0.1% Pataday 0.2%)
2. Topical steroids (Pulse Therapy) e.g., Preservative free Prednisolone (0.5%, 1%), Preservative free Dexamethasone (0.01%) FML (0.1%) Loteprednol Etabonate (0.2%, 0.5%), Rimexolone (Vexol) 1% REVIEW up to 2-3 weeks
3. AT NEXT VISIT if controlled start to taper off steroids and review 8 weeks

Follow up at 2-3 months

Hiebers pharmacy can compound preservative-free:

- Triamcinolone
- Dexamethasone
- Prednisolone

For intractable disease not responding to steroids or Cyclosporine A [12-15]
Options are: Topical Tacrolimus (FK506) 0.005% e/d OR 0.03%, 0.1% e/o

Severe Symptoms
Corneal involvement (PEE, PED) with severe tarsal disease (papillae up to 0.4-1mm)

1. Olopatadine hydrochloride BID (Patanol 0.1% or Pataday 0.2%)
2. Preservative free Prednisolone (0.5%, 1%) OR FML (0.1%) QID, Preservative free Dexamethasone (0.01%) in tapering doses
3. Consider cyclosporine BID (0.05% or 0.1%)

Follow up at 2-3 weeks

If no improvement:
EUA with supratarsal steroid injection TRISENCE (preservative free Triamcinolone acetonide 40 mg/mL and preservative free dexamethasone 4 mg/mL)

Old shield ulcer with severe tarsal disease

If shield ulcer has any material with plaque > must go to OR for EUA, debridement and supratarsal steroid injection as early as possible (recommend debridement first so lid isn't swollen)
SUPRATARSAL STEROID INJECTION:
TRISENCE (Preservative free Triamcinolone acetonide 40 mg/mL and preservative free dexamethasone 4 mg/mL)

Add topical antibiotic (Vigamox or Polytrrim)
Follow up 5-7 days later

If no corneal reepithelialization in 2-3 weeks

Persistent epithelial defect

Consider corneal debridement OR Superficial keratectomy

Consider Amniotic membrane transplantation

CLINICAL EFFECTIVENESS GUIDELINE

Steroid Responders [9-11]

- Can substitute with topical Cyclosporine A as a steroid sparing agent (0.05%-2%) QID
- Add topical antiglaucoma Rx to the Steroid/Cyclosporine regimen
- Even if there is concern regarding steroid response DO NOT USE Topical NSAID's in the presence of PEE's or shield ulcer as there have been reports of autolysis of the cornea in such circumstances
- **EVERY CHILD ON STEROIDS MUST HAVE IOP CHECKED OR ASSESSED EVERY VISIT**
- **ONCE RAISED IOP IS NOTICED: VISUAL FIELD (IF CHILD IS OLD ENOUGH)**
- RAISED IOP (>21MMHg) needs anti-glaucoma medication especially in the presence of continued steroid need.
 - a. Add Timolol 0.5% BID
 - b. Then change to Cosopt BID
 - c. Consider Diamox 4-7 mg/kg four times a day if topical not enough
- Uncontrolled glaucoma on topical medications: Consider TRABECULECTOMY-With MMC(0.4mg/mL)¹⁰

List of Eyedrops for Allergic Conjunctivitis

| DRUG | TRADE NAME |
|--|------------------------------|
| 1. Ketotifen Fumarate 0.025% (Preservative free) | Zaditor/Alaway |
| 2. Lodoxamide 0.1% QID | Alomide |
| 3. Olopatadine hydrochloride | Patanol 0.1% / Pataday 0.2%* |
| 4. Prednisolone 1% (Preservative free) | Predforte |
| 5. Fluoromethalone FML (0.1%) | FML |
| 6. Loteprednol Etabonate (0.2%, 0.5%) | Alerex/Lotemax |
| 7. Rimexolone 1% | Vexol |
| 8. Dexamethasone 0.1% (Preservative free) | Maxidex |
| 9. Cyclosporine A 0.05% | Restasis |
| 10. Cyclosporine A ophthalmic emulsion 0.1% | Verkazia |

* Patanol, pataday, pazeo available over the counter (this may be cheaper than prescription so tell parents to ask pharmacist)

CLINICAL EFFECTIVENESS GUIDELINE

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A Clinical Effectiveness Guideline (CEG) is an evidence-based, **suggested** collaborative care plan that is intended to promote coordination and communication with respect to patient care and may be modified to meet individual care needs.