

## 5% Betadine Treatment for Acute Adenoviral Conjunctivitis

*Ting Zhang, O.D., F.A.A.O.*

### **Background:<sup>i</sup>**

There are 45 distinct adenoviral serotypes that can cause acute viral conjunctivitis.

Typical course: 14-21 days, usually starts in one eye and spreads to the other. If untreated, will report worsening of symptoms around day 5.

### **SSx:**

- Sudden onset
- Unilateral->may spread to fellow eye, less severely, after several days
- FB sensation
- Watery eyes
- Some pain
- Burning sensation
- Bulbar hyperemia
- Crusting on lids in A.M.
- Follicular reaction on palpebral conjunctiva
- Some may report greenish mucoid discharge in the mornings.
- Recent h/o cold/sinus (sometimes patient will be sniffing and say it's just allergies)

### **EKC:**

- + corneal involvement!
- Symptoms are the worst around day 4-5.
- SPK → multifocal coarse epithelial erosions → subepithelial opacities day 10-14.
- Petechial subconj heme possible
- Tender ipsilateral pre-auricular node

### **PCF:**

- + mild fever and pharyngitis
- SPK but no SEI
- Non-Tender nodes.
- Children at contaminated pools.
- SPK but no SEI.
- non-tender node.

### **Betadine In-Office Procedure:<sup>ii</sup>**

1. Instill 2 gtt topical anesthetic (proparacaine or tetracaine) in the affected eye
2. Combine 6 gtt 10% betadine and 1 vial (~6 gtt) of Refresh Plus (or any preservative-free) AT in a new contact lens case, stir with tip of Refresh vial to mix
3. Suck the diluted Betadine solution (~5%) back into the Refresh vial for instillation
4. Instill 5 gtt 5% betadine into affected eye and spread excess over lid margin and lashes
5. Instruct patient to close eye and roll eyes around for 1 minute
6. Irrigate eye thoroughly with sterile saline
7. Instill 1 gtt Ketorolac and/or 1 gtt of Proparacaine before discharging patient
8. Rx Refresh Plus 1 gtt Q1H in affected eye while awake for 2-3 days
9. Optional but helpful: Rx 1 gtt FML QID in the affected eye for 4 days, no taper needed.  
(Fluorometholone Ophthalmic suspension 0.1%)

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### **Assesment and Plan:**

Viral conjunctivitis \_\_\_ eye. Pt ed on finding. Condition self-limiting, lasting 21 days, worse days: 4-7. Highly contagious while eyes are red and watery, avoid touching eyes, shaking hands, and restrict work and school. Wash hands before and after touching eye. Wash all towels and pillows w/ hot water. Pt ed on in-office off-label Betadine Tx and agrees to Tx. Pt denies iodine sensitivity and understands initial discomfort with Tx to include burning, blurry vision x 1 day.

Rx FML 1 gtt QID in the affected eye for four days. Recommend Refresh plus 1 drop every 1-2 hrs and as needed in the affected eye. Monitor. RTC 5 days for anterior seg eval, sooner if symptoms worsen significantly.

### **CPT Codes:<sup>iii</sup>**

920x2 Intermediate Exam

99070 Materials and Supplies

\*Dr. Randall Thomas recommends Betadine within 3 days of onset of symptoms.<sup>iv</sup> However, if it's past that treatment window, but the patient looks and feels miserable, I would still Betadine them. I usually see the redness and discharge clearing up 2 days after the procedure.

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<sup>i</sup> Epstein, A. B., & Quinn, C. J. (2008). Chapter 25 Diseases of the Conjunctiva. In *Clinical Ocular Pharmacology* (5th ed., pp. 451-454). Butterworth-Heinemann.

<sup>ii</sup> <http://www.betadineforekc.com/keratoconjunctivitis-treatment-demonstration.aspx>

<sup>iii</sup> Melton, R., OD, & Thomas, R., OD. (2014, May 15). Combating Viral Eye Disease. *Clinical Guide to Ophthalmic Drugs*, (A Supplement to Review of Optometry), 39.

<sup>iv</sup> <http://www.eyupdate.com/component/content/article/35-general/case-studies/75-adenoviral-infections-ekc>