Ixnay to the “Pink Eye” Diagnosis: Revisiting EKC
By Alana N. Curatola, OD

The majority of times that we see Epidemic Keratoconjunctivitis (EKC), it’s a patient that has been misdiagnosed with “pink eye,” prescribed an antibiotic, symptoms continue to worsen, and they end up in our chair with an extremely uncomfortable eye(s).

Differentiating the various causes of conjunctivitis can be challenging, especially when practitioners are unprepared to manage the patient’s signs/symptoms or lack knowledge in various differential diagnoses. A friendly reminder about one of the most common causes of “red eye” aims to reduce the “shotgun approach” to treatment style, and improve patients’ symptoms and less chair time.

Recognizing EKC in your chair

Given EKC’s incubation period, patients may be infected for a few days before they begin developing symptoms. This can lead to inadvertent spread and difficulty identifying the condition early.

Adenoviral conjunctivitis often begins with conjunctival hyperemia/chemosis, serous discharge, eyelid edema, and follicular conjunctivitis. Corneal involvement becomes evident as the disease progresses and SEIs are often considered pathognomonic for EKC in the setting of follicular conjunctivitis. About 80% of EKC patients develop superficial keratitis and about 30-50% of patients develop subepithelial infiltrates around days 7-11. Before the virus is completely shed, conjunctival inflammation may become so severe that it results in pseudomembrane development.

Finally, don’t forget to check for lymphadenopathy. About 30-50% of patients with adenovirus conjunctivitis have palpable/tender preauricular lymph nodes.

Call it what it is

In early stages, EKC can be difficult to distinguish. Because of this, the traditional gold standard for EKC diagnosis has been cell culture in combination with immunofluorescence staining. But who has time for that? In recent developments, the RPS Adeno Detector Plus has emerged as a point-of-care immunoassay that has 88-93% sensitivity, 91-96% specificity. The in-office test is a great tool for viral etiology confirmation, is easy/quick to administer, and has a unique Medicare procedural CPT code (87809qw) that more than covers the cost of the test kit.

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**Vital Information**

Please encourage your patients to share their NWES experiences online at nweyes.com. Have them look for the stars at the top of our website to let us know what they think—raves or rants—their opinions help us to grow!

★★★★★

“My eyes are in good hands with Dr. Hoki.”

From Renton patient, J.P.

“I have been going to Northwest Eye Surgeons for a decade now, seeing them for my glaucoma, my eye health in general, & my cataract & glaucoma surgery. I cannot imagine allowing any other facility, doctors, or technicians to take care of my eyes. I will always highly recommend them for the best eye care.” From Sequim patient, Linda A.

“Very impressive staff! Everyone was extremely professional, friendly, and proficient. Then I met Dr. Osgood! My confidence in him was almost immediate. He clearly explained his interpretation of my test results and options to correct my eyesight. I felt that his attention was 110% on my vision challenges and possible corrections. I most definitely will recommend this location of Northwest Eye Surgeons, Dr. Osgood, & it’s entire staff!” From Smokey Point patient, Sharon M.

“Everyone at this office has been helpful, considerate friendly. Dr. Kuzin did glaucoma and cataract surgery on my left eye, which was very successful, and my follow-up treatment and check-ups by Dr. Wright have all been a very good experience. Dr. Wright especially, is thoughtful, listens to your concerns and makes every effort to address them. Also, I have never had to wait more than 5 or 10 minutes which is extraordinary for a medical office.” From Bellingham patient, Jill W.

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**In-office treatments:**

**Betadine** (povidone-iodine) has a broad antimicrobial spectrum and is often used in pre- and postoperative ocular surgical settings for prophylaxis. A Betadine rinse has been used as “off label” to provide antimicrobial activity as well as reduce viral shed/spread. Protocol often calls for the provider to anesthetize the affected eye, instill a few drops of 5% povidone-iodine solution, have patient close/roll the affected eye for 1-2 minutes, rinse thoroughly with sterile saline irrigating solution, and instill a topical NSAID to help with pain management after the anesthetic wears off.

**Pseudomembranes** should be manually removed with a cotton-tip applicator or forceps to improve symptoms, reduce viral load / speed resolution, and prevent formation of symblepharon.

**Education** regarding the condition is just as important as treatment. Patients must be properly educated about their contagious period and should take precautions to limit spread of the condition.

**Prescribing:**

**Topical steroids** are justified when patients develop SEIs or pseudomembranes from EKC. Typically a lower-potency topical steroid suspension, such as flurometholone or loteprednol, is adequate and prescribed QID for 1 week followed by a slow taper over several weeks.

**Topical ganciclovir 0.15%** (Zirgan) has been used “off-label” for EKC because it has shown potential against specific adenoviral serotypes. Studies have shown a faster resolution of conjunctivitis (7.7 vs. 18.5 days) as well as decreased risk of SEI development (2 vs. 7 cases) when patients were treated with topical ganciclovir compared to a control group treated with artificial tears.

Development of a topical combination medication containing **0.4% povidone-iodine + 0.1% dexamethasone** is in clinical trials. One study showed the medication was effective in decreasing the symptomatic period as well as shortening the duration of viral shed/spread. Another study has shown that 1-drop of 0.6% povidone-iodine + 0.1% dexamethasone QID for 5 days significantly increased the rate of adenovirus eradication compared to controls.

Astute clinical evaluation will help you identify and manage EKC appropriately. EKC is considered a very specific, more virulent form of adenovirus conjunctivitis due to the potential effect it has on vision, as well as the public health risk.

Misdiagnosis can lead to inadvertent spread, patient frustration from ineffective treatments and numerous office visits, increased health care costs, antibiotic resistance, and even a socioeconomic effect from missed work/school. If you have any questions, please feel free to contact me, acuratola@nweyes.com or 800-826-4631.

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**Citations**

4. [https://www.ncbi.nlm.nih.gov/pmc/articles/PMC33880539/](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC33880539/)
5. [https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3504581/](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3504581/)
Practice Update

New Look to nweyes.com

Watch for an update to our website that will include easier navigation, online ordering of our materials, patient ratings and portal access, and many more features. **Consultation forms can now be submitted securely online via the new website.** We will also add the ability to order brochures, appointment cards and other items online and have them shipped directly to your clinic. These changes will ease the access to information and services for patients, our referring family providers and their staffs.

Online Feedback Refines Our Services

You and your patients can provide online feedback to us via Google, Yelp, Facebook, and the Star Review Rating on our company website. Our increased online presence makes it easier for patients to share their experiences, and for us to identify successes and areas of opportunity. Our patients and referring family eye doctors give us the measure of how we can work together best. Thank you for sharing your perspectives and encouraging your patients to do so.

Exploring Croatia For Business and Fun!

**By Brett G. Bence, OD, FAAO**

The decision to attend the European Academy of Optometry and Optics in Pula, Croatia was easy. I simply asked my wife, Robin, who said: “No question, we are going!!”

First off, a short summary of the meeting in Pula: The European optometry prescription authority varies substantially between countries in Europe. After I gave a few glaucoma talks, including a video gonioscopy course, we rented a car for adventures ahead.

We saw a stunningly well preserved Roman coliseum in Rovinj. Then on to Zagreb, the capital, which included a visit to the Museum of Broken Relationships—I had my doubts, but it showcased captivating love-lost stories. A few hours drive took us to Plitvice Park for a 13 mile hike and fabulous, picturesque waterfalls—limestone keeps the water pure with no algae.

In Split, on the north Dalmatian coast, we visited the Diocletian’s Palace and tasted octopus pasta. We also sailed to Korcula, and then for Dubrovnik, where we walked around the high walls; took a gondola for a bird’s eye view; and a kayak trip around the island of Lokrum. Strolling the white sandy beaches and indulging a nightly gelato fix was a great way to end an exceptional Croatian adventure.

We determined that this trip was one of our best. The European Academy of Optometry meetings are in Rome and Helsinki for the next two years.

So, it looks like Video Gonioscopy may live to see another day in Europe! If you’d like to learn more about the European Academy or the American Academy of Optometry, please contact me at bbence@nweyes.com.

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Robin and Brett Bence, In Plitvice Park, Croatia. B. Bence

Dining in Korcula, Croatia. B. Bence

Sunset over Dubrovnik, Croatia. B. Bence
5 Little Facts About EKC

Adenovirus serotypes 8, 19, & 37 cause EKC.

Most people have low levels of natural immunity to the adenovirus pathogen, making them susceptible to infection.¹

EKC adenoviruses survive for months on common objects, like towels or doorknobs, and can resist disinfection methods such as heat or hydrogen peroxide.²

EKC incubates for 2-14 days. Patients may remain infectious for ~2 weeks after symptoms develop.¹ EKC is self-limited and resolves in 2-3 weeks' time. The rule of 8’s may ring a bell: ~8-day incubation period, SEIs develop around day 8, and viral shedding can last for ~16 days.²

EKC outbreaks are common where viruses can spread quickly, like hospitals, schools, or crowded living situations. Up to 45% of people in an EKC patient’s close surroundings may become infected.¹⁴

EKC is spread via respiratory droplets or via viral shedding (exuded to the environment or transmitted to another body part).²

Citations: See page 2
Image source: https://commons.wikimedia.org/wiki/User:Splette

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