VOL. 2.11 | NOV. 2019

HospitalMD®

EMERGENCY | HOSPITALIST | HYBRID

# insight™

**CLINICAL EDITION** FOR SMALL COMMUNITY HOSPITALS

# HospitalMD *CASE STUDY*

**THE CASE:** A 14-year-old male presents to the ED with erythema and pain to the left eye for 24 hours. He reports no known eye injury and states that his vision is unchanged but that it hurts worse when he is in bright light. He states that he "feels like I have something in my eye that won't go away". He has no other symptoms to report and is otherwise healthy. UTD on all immunizations.

Based on actual cases that HospitalMD providers have seen. However, details about the case, patient and outcomes have been modified in order to protect patient privacy.

**From the Editor:** Welcome to this installment of **HospitalMD insight™–Clinical Edition**! This publication is aimed to inspire and equip you to advance clinical excellence in your community hospital. I would love to hear your feedback, comments, suggestions and accolades. Please email me with any thoughts at: BNewberry@HospitalMD.com.

**BRITTANY NEWBERRY**, PhD, MSN, MPH, APRN, FNP-BC, ENP-BC
Board Certified Family and Emergency Nurse Practitioner,
Vice President Education and Provider Development, HospitalMD

**History:** None

**Meds:** None

**VS:** HR – 86, BP – 122/76, RR – 16, T – 98.4 °F, POx – 100% on RA

**Exam:** HEENT: Normocephalic and atraumatic, no nasal discharge, oropharynx clear, uvula midline, TMs intact bilaterally, Visual acuity 20/20 OD, OS and OU. EOMs intact. There is erythema and tearing noted from the left eye. No gross abnormalities noted on ophthalmoscopy. On exam, an eyelash was removed from underneath the upper eyelid with a cotton swab. Fluorescein stain shows a 1cm wide linear corneal abrasion over the left central cornea of the left eye. All other systems WNL.

**Labs:** None

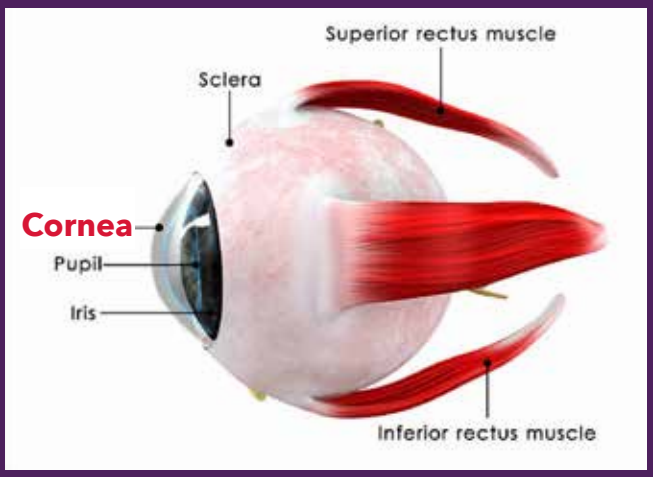
**Imaging:** None

**Treatment:** Gentamycin ophthalmic ointment 0.3% applied to left eye

**Diagnosis:** Corneal abrasion due to foreign body OS

**Disposition:** The provider contacted the nearby Wal-mart vision center and set an appointment for the patient to be seen in office the following day for a re-evaluation. Patient was discharged to home with Gentamycin ophthalmic ointment OS TID and instructions to avoid sunshine, bright lights, and eye fatigue until pain subsides.

**The Outcome:** Patient seen at vision center the following day with improved pain and healing corneal abrasion.




## TAKE AWAYS:

- Try to set follow up for patients whenever possible.
- Utilize local specialists if available who are qualified to evaluate the issue.
- Know when to refer a more serious eye injury for immediate evaluation by an ophthalmologist.
- Be sure to document your fluorescein stain procedure (and slit lamp evaluation if appropriate) and findings!

## CUSTOMER SERVICE TIPS:

- Provide education to the family about appropriate evaluation and treatment options.
- Provide education to come to the ED for any acute visual change.
- Explain the warning signs that should prompt a return to the ED.
- Encourage follow up with ophthalmology as directed.
- Provide patient with name, address, directions and phone number for the appointment.

## HOW COMFORTABLE ARE YOU ASSESSING OCULAR INJURIES?

In last month's issue we focused on vision threatening conditions that CANNOT be missed in the ED. This month's issue will focus on more commonly seen eye conditions.

First, let's run through some quick reminders about the ocular exam. These elements should be assessed and documented for every ocular complaint unless otherwise noted.

# Common Conditions

### Eyelid Lacerations

Lacerations of the eyelid often require repair by an ophthalmologist or plastic surgeon due to the unique anatomic and cosmetic difficulties associated with these injuries. Any eyelid laceration meeting the following conditions should be referred to one of those specialties:

- Suspected open globe injury or foreign body
- Lacerations through the full thickness of the eyelid
- Lacerations with orbital fat prolapse
- Lacerations through the lid margin
- Lacerations involving the tear drainage system
- Lacerations with poor alignment and/or avulsion

You can learn more about the evaluation and management of eyelid lacerations on UpToDate.

**COMMON CONDITIONS** CONTINUES ON PAGE 4

# The Exam

- **Visual acuity** – This is the "vital sign" of the eye. This should be assessed prior to any other intervention if possible. Be sure to document visual acuity in both eyes individually and together. **DO NOT assess visual acuity for chemical burns, penetrating foreign bodies to the eye or globe rupture**.

- **Inspection** – Inspect the eyes prior to any additional testing. Be sure to look at both eyes, even if the complaint is only with one. Inspect for any gross abnormalities, discharge, redness or injury, Evert the eyelids using a Q-tip and inspect under the lids. Check pupillary response bilaterally.

- Assess **extraocular movements** and **visual fields**.

- **Ophthalmoscope exam** – Examine the posterior eye structures such as the fundus and optic disc. You can learn more about this on UpToDate.

- **Slit lamp inspection** – This is standard of care in the ED if your ED has a slit lamp.

- **Woods lamp inspection** – If there is no slit lamp, you can utilize fluorescein stain and a woods lamp to inspect for any surface abnormalities on the cornea.

- **Tonometry** – (If available) check the pressure in both eyes following the manufacturers recommendations based on the unit that is available in your ED.

## Corneal Abrasions and Foreign Bodies

Patients with corneal abrasions frequently report severe eye pain and often have trouble opening the eye due to photophobia and/or a foreign body sensation. Corneal abrasions without other serious eye injuries typically have normal visual acuity, normal pupillary response, and a defect noted on fluorescein examination.

Patients with a corneal foreign body may or may not recall an incident of material falling into the eye. Symptoms of pain and foreign body sensation may take a while to manifest or the symptoms may be immediate. Always consider the possibility of a penetrating eye injury with any high velocity foreign body complaint such as the use of a metal grinder. Corneal foreign bodies are typically obvious with careful inspection of the cornea, especially with a slit lamp. Patients with the following conditions should be urgently referred to ophthalmology:

- **Corneal infiltrate, white spot or opacity suggesting corneal ulceration**
- **A foreign body that cannot be removed**
- **Hypopyon (pus in the anterior chamber)**
- **A large epithelial defect**
- **Purulent discharge**
- **A drop in vision on the Snellen chart of more than 2 lines**
- **An infant or child with persistent discharge or unwillingness to keep the eye open**
- **A corneal abrasion that has not healed after 3 to 4 days**

Patients with corneal abrasions who are to be discharged should be prescribed an antibiotic ointment (preferred over drops) and this antibiotic should cover pseudomonas if the patient wears contact lenses. Topical steroids are **contraindicated**, and small corneal abrasions should **NOT** be patched. Patching may be considered in a patient with a large abrasion covering more than 50% of the corneal surface. Patients who wear or have recently worn contact lenses should not be patched. Corneal abrasions can be very painful so consider NSAIDs, cycloplegics or even short-term opiate therapy for these patients. Patients should NOT be prescribed topical pain medications as overuse of these solutions can cause epithelial thinning and delayed healing Tetanus update is not required for small corneal abrasions.

Specific information on the evaluation and management of corneal abrasions can be found on UpToDate.

## Conjunctival Injuries

Conjunctival injuries can include subconjunctival hemorrhage, conjunctival lacerations, foreign bodies or abrasions. Always assess for additional injury to other structures of the eye. Ophthalmologic consultation is indicated for patients with conjunctival injury complicated by an open globe, traumatic hyphema, deeply embedded conjunctival foreign bodies, or conjunctival lacerations greater than 1 cm in length.

Specific information on the evaluation and management of these injuries can be found on UpToDate.

## Orbital Fractures

Common signs and symptoms of orbital fracture include periocular ecchymosis, pain on lateral gaze, diplopia due to ocular muscle entrapment, decreased sensation in the distribution of the infraorbital nerve, fracture site tenderness or bony step off, and/or crepitus indicating orbital emphysema caused by extension of an orbital fracture into the sinus. Thin cut coronal CT of the orbit is the imaging modality of choice to diagnose orbital fractures.

Patients with orbital fractures may have associated vision-threatening eye injuries so be sure to do a complete ocular exam. An ophthalmologist should be consulted immediately for globe rupture or persistent vagal symptoms such as nausea, vomiting and/or bradycardia associated with extraocular muscle entrapment or within 24 hours for muscle entrapment as the result of orbital floor or medial wall fractures, enophthalmos or orbital dystopia that results in significant facial asymmetry or naso-orbital-ethmoid fractures with injury to the medial canthal ligament and/or lacrimal apparatus.

Initial management for orbital fractures should include cold packs as needed to control swelling, prophylactic antibiotics to cover sinus pathogens, oral corticosteroids to reduce/control inflammation as needed and appropriate pain medication if necessary. Orbital fractures are discussed in detail on UpToDate.

# DON'T FORGET!

Whenever writing a narcotic or benzodiazepine prescription for longer than 3 days of medication, please be sure to check your local drug database and DOCUMENT that you reviewed the patient's account prior to prescribing these drugs. For the MOST part, we should be writing very short courses (1-3 days) of these drugs, if we write for them at all. Patients should have these drugs prescribed and managed by their primary care provider in an effort to improve patient safety around these medications.

# New Education Requirements For 2020

**Moving forward, all HospitalMD providers will be required to have 4 stroke related CMEs per year AND 9 trauma CMEs per year. This is to meet requirements for both stroke and trauma designation and just because it's good practice! Please send me these CMEs as you acquire them. If you take ATLS or TNCC in 2020, that will count for your trauma CME for the year. Below are some ways that you can obtain these CMEs. There are lots of ways to obtain these CMEs, on page 6 are just a few examples.**

## STROKE

**Requirement: 4 CMEs annually**
**EB Medicine "Emergency Stroke Care Series: Advances and Controversies"**

- **Cost: $179**
- **CME: 8 hours**

**American Heart Association "Acute Stroke Online Module"**

- **Cost: $27.50**
- **CME: 1.5 hours**

**National Stroke Association "Stroke Rapid Response Training"**

- **Cost: $20**
- **CME: 2 hours**

**NIH Stroke Scale Training**

- **Cost: Free**
- **CME: 3 hours**
- **Look for APEX NIH Stroke Scale Training in HealthStream on your To Do list**

## TRAUMA

**Requirement: 9 CMEs annually**

**ATLS**

- **Cost: Varies but usually around $800-900**
- **CME: 17 (please note you can only count this to satisfy the requirement for one year even though your certification is for 4 – so this covers you in the calendar year that the course is taken)**

**Advanced Emergency Medicine Bootcamp**

- **Cost: $475**
- **CME: 2 Trauma CME (even though the entire course offers 23 CME in its entirety)**

**EM Crit – Trauma Compilation I**

- **Cost: $79.00 (includes 2 years' worth of access)**
- **CME: 16**

**EB Medicine**

- **Can mix and match topics that have trauma CME designated credits HERE and you can purchase each 4 hour course and CME test as a bundle for $49**
- **EB Medicine also has an 18 hour trauma course – Emergency Trauma Care: Current Topics and Controversies volume III – available for $249**

**Moving forward, all HospitalMD providers will be required to have 4 stroke related CMEs per year AND 9 trauma CMEs per year.**

## DO YOU KNOW HOW TO ACCESS YOUR UPTODATE CME?

Did you know that UpToDate gives you CME credit for every subject that you review? It is easy to obtain a record of your completed CME with UpToDate!

- Sign into your personal UpToDate account (this won't work with a generic "site" login).
- In the upper right hand corner you will see a link for "CME".
- Click on this link.
- Click "Redeem" to redeem your CME (credits are available for 2 years).
- Click on "50 Credits".
- Place a checkbox next to the credits you would like to redeem and click "Continue" at the bottom.
- Answer the appropriate questions.
- Click "Next".
- Answer the additional questions.
- Click "Save".
- Click "Download" next to your certificate to view and/or save.

# Documentation Reminders

- **HPI** – Strive to always include **FOUR HPI** elements in your charts.

- **ROS** – Document the necessary elements in the ROS and then write or check "**ALL OTHER SYSTEMS REVIEWED AND ARE NEGATIVE**". This statement must be present, and the wording MUST BE PRECISE in order to be considered acceptable by the billing company.

- **EXAM** You must have **EIGHT** exam elements present for a higher level chart.

- **ECG/RADIOLOGY INTERPRETATION** – If you have ordered either of these, the statement "interpreted by me" must be present in the chart. **An ECG must have 3 elements and an interpretation documented and a radiology result must have an interpretation documented**.

- **CRITICAL CARE TIME** – If your patient qualifies for critical care, BE SURE to document this on the chart.

- **PROCEDURES** – Be sure to include all pertinent details regarding procedures so that any more complex procedures (ie intermediate vs simple suture repair) can be billed at the rate that matches the true complexity of the procedure.

If you have ANY questions about the documentation of any of these things, or any other types of documentation, please don't hesitate to contact your medical director or myself – bnewberry@hospitalmd.com.

# Resources

## GET ACEP NOW

ACEP Now is a great publication that works to keep all of us working in Emergency Medicine up to date on clinical and political topics. Go to this link to look at the latest issue and subscribe!

### Need an ECG or Imaging Refresher?

The Center for Medical Education has an excellent online course for ECG and imaging interpretation! These two courses are completely online, earn you CMEs and are reasonably priced at $115 each. You can find links for each course below. I HIGHLY recommend these courses! They are very informative and well done.

**Advanced Emergency Medicine Bootcamp: ECG Interpretation** (3.75 CMEs)

**Advanced Emergency Medicine Bootcamp: Imaging Interpretation** (4 CMEs)

### Upcoming Conferences

**ACEP Calendar of Emergency Medicine Conferences**

**Calendar of Hospital Medicine Conferences**

**AAENP Conference Events**

### Online Education

**Emergency Medicine Boot Camp**

**Hospital Medicine Boot Camp**

### Procedure Training

**Global Training Institute**

**Emergency Procedures Course**

### Certification Reviews

**Fitzgerald ENP Certification Review**

**Rosh ENP Certification Review**

### Journals and Professional Organizations

FREE! **Emergency Medicine News**

FREE! **ACEP Now**

**Emergency Medicine Practice**

**Advanced Emergency Nursing Journal**

**Annals of Emergency Medicine**

**Journal of Hospital Medicine**

**Society of Hospital Medicine**

**American College of Emergency Physicians**

**American Academy of Nurse Practitioners**

**American Academy of Emergency Nurse Practitioners**

**American Academy of Physician Assistants**

### Podcasts

**EM: Rap**

**EMCRIT**

**FOAMCast**

**REBELEM**

**EMplify**

**Hospital and Internal Medicine Podcast**

**The Hospitalist Podcast**

If you have a great resource you would like added to this list, let us know!

# A relentless passion for quality and care in small community hospitals

Facebook.com/HospitalMD

Linkedin/HospitalMD

HospitalMD.com

DELIVERING EXCELLENCE. EVERY TIME.