Andres Hernandez

H&P #1 – Emergency Medicine

Chief Complaint: “Eye Redness” x 2 days

HPI:
A 32-year-old female with no significant past medical history presents to the ED with complaints of right eye redness, watery discharge, swelling, and pain that has progressively worsened over the past two days. Symptoms initially began with right eye redness without pain. The patient was seen by telehealth on the first day of symptom onset and was prescribed ofloxacin eye drops, which provided no improvement. Over the past 24 hours, the swelling and pain have significantly worsened. She reports constant lacrimation and notes that the swelling is so severe that she can only partially open the affected eye. The patient describes her current eye pain as non-radiating and throbbing, rated at 8/10 in intensity and aggravated by eye movement. She took Tylenol this morning, which provided mild relief. The patient denies other symptoms such as fever, chills, cough, or congestion. She also denies any trauma, foreign body in the affected eye, visual changes, sick contacts, or recent travel.

Past Medical History:
Up-to-date on all immunizations

Past Surgical History:
none

Medications:
Tylenol acetaminophen, prn
Ofloxacin drops
Otherwise, no other medications

Allergies:
NKDA
No food allergies
No environmental allergies

Family History:
Mother, alive, well
Father, alive, well

Social History:
Substances: Denies a history of substance abuse. Denies smoking. Denies vaping. Denies drinking alcohol. Denies drinking caffeine.
Travel: denies recent travel
Diet: Not on any specific diet/regimen
Sleep: Averages 7-8 hours per night
Exercise: daily walking

ROS:
General – Denies fever, headache, weakness or recent weight loss.

Skin, hair, nails – Denies changes in texture, excessive dryness or sweating, discolorations, pigmentations, moles/rashes, pruritus, or changes in hair distribution.

Eyes – **Admits to lacrimation.** Denies visual disturbance, photophobia, or pruritus. **Admits to the use of contact lenses.** Last eye exam was 1 year ago, unremarkable.

Ears – Denies ear pain, muffled sound, deafness, discharge, or sensation of fullness.

Nose/sinuses – Denies discharge, obstruction or epistaxis.

Mouth/throat – Denies sore throat, bleeding gums, mouth ulcers, voice changes.

Neck - Denies localized swelling/lumps or stiffness/decreased range of motion.

Pulmonary System – Denies shortness of breath, dyspnea on exertion, cough, wheezing, hemoptysis, cyanosis, orthopnea, or paroxysmal nocturnal dyspnea.

Cardiovascular System – Denies chest pain, HTN, irregular heartbeat, edema/swelling of ankles or feet, syncope, or known heart murmur.

Gastrointestinal System – Denies nausea, vomiting, diarrhea, abdominal pain, or jaundice

Genitourinary System – Denies urinary frequency, dysuria, or flank pain.

Endocrine System – Denies polyuria, polydipsia, polyphagia, heat or cold intolerance, goiter, excessive sweating, or hirsutism.

Psychiatric – Denies depression, feelings of helplessness or hopelessness, lack of interest in usual activities, anxiety, or suicidal ideations.

Physical Exam:
Vital Signs:
BP: 128/76 mmHg
P: 58 beats/min, regular
RR: 17 breaths/min, unlabored
T: 98.5 degrees F (oral)
O2 Sat: 99% room air

General: Well-nourished, well-groomed female who appears her stated age. She is awake, alert, and oriented x3. Sitting comfortably in no acute distress. Patient has notable right-eye swelling, which patient holding tissue paper over the eye to collect excess lacrimation. Very cooperative during history taking and physical exam. Can ambulate without assistance.

Nose: Symmetrical. No masses, lesions, deformities, trauma, or discharge. Nares patent bilaterally. Nasal mucosa pink and well hydrated. No discharge noted on anterior rhinoscopy. Septum midline without lesions, deformities, injection, or perforation. No foreign bodies.

Eyes: **The right eye reveals significant edema and erythema of the eyelid, with warmth to touch and tenderness on palpation over the periorbital area. Extraocular movements are intact without restriction, although movement elicits discomfort. There is excess lacrimation noted, but no purulent discharge is present. Mild scleral injection is observed in the right eye**; otherwise, the sclera are white, the cornea is clear, and the conjunctiva is pink. Pupils are equal, round, and reactive to light and accommodation (PERRLA). No strabismus, exophthalmos, or ptosis is seen. Visual acuity was not tested as the patient did not have their contact lenses or reading glasses available. The Seidel test is negative bilaterally, with no evidence of foreign body or corneal abrasions.

Ears: Ears symmetrical. No lesions, masses, or trauma. No discharge or foreigns body in external auditory canals. TM's are pearly white and intact with light reflex in good position. Auditory acuity intact.

Sinuses: Non tender to palpation and percussion over bilateral frontal, ethmoid, and maxillary sinuses

Neck: Trachea midline, no masses, lesions, scars, or visible pulsation. Supple and nontender to palpation. Full ROM. Non palpable cervical adenopathy. No stridor noted. 2+ carotid pulses, no bruits bilaterally.

Mouth: No cyanosis of lips, white teeth, with no loose, or broken teeth. Gums pink in color, no swelling, bleeding, or pain. Oral mucosa pink. No discoloration, lesions, nodules, swelling. Tonsils visible but not enlarged.

Skin: warm, moist, with good turgor. No masses or lesions noted. No bruising, petechiae, ecchymoses, telangiectasias noted.

Cardiac: Regular rate and rhythm (RRR). S1 and S2 are distinct with no murmurs, gallops, or rubs. Chest is symmetrical, no derformities, no trauma. Lat to AP diameter 2:1. Nontender to palpation.

Pulmonary: No wheezing, rales, rhonchi, crackles, heard. Respirations unlabored / no paradoxical respirations or use of accessory muscles noted. No clubbing noted.

Differential Diagnosis:

- Periorbital Cellulitis (or preseptal cellulitis) is an infection of the anterior portion of the eyelid, not involving the orbit or other ocular structures. Generally, a mild condition. Presents unilateral ocular pain, eyelid swelling, and erythema. History of recent sinusitis, insect bite, or local face or eyelid trauma is supportive of a diagnosis.

- Orbital Cellulitis is an infection involving the contents of the orbit but not the globe. Causing swelling and inflammation of the extraocular muscles. Serious conditions that can cause serious complications such as vision loss or even loss of life. Presents with ophthalmoplegia, pain with eye movement, impaired visual acuity, and proptosis. Fever is usually present.

- Subperiosteal and orbital abscess are typically have more severe signs (proptosis, ophthalmoplegia) and symptoms (pain with eye movements) than those without orbital abscess. Abscesses are more likely to require surgical drainage.

- Allergic reaction can have a similar appearance to preseptal cellulitis but can usually be differentiated by the exposure history such as allergy to a topical ophthalmic antibiotic or the sting of an insect.

- Environmental allergies can also cause eye swelling. Similarly, angioedema, although not a true allergic reaction, could also be the cause, but rarely unilateral like in this patient.

- Blunt trauma to the eye can also cause some swelling however that would also be revealed in the history.

- Hordeolum (style) and chalazion can also be associated with eyelid inflammation but they usually present as a discrete nodular lesion. Hordeolum is an acute inflammation of the eyelid that presents as a painful swelling or nodule. Chalazion on the contrary is a painless localized eyelid swelling and compared to hordeolum usually has more mild erythema. Hordeolum is more acute presenting over a day where chalazion grows slower sometimes taking weeks.

Assessment:
A 32-year-old female with no significant past medical history presents with a 2-day history of progressively worsening right eye swelling and pain. Findings were significant for periorbital edema, erythema, and pain with eye movement. Extraocular movements are intact, and there are no visual changes or systemic symptoms such as fever or chills making orbital cellulitis less likely. The patient will undergo further evaluation to distinguish between periorbital cellulitis and orbital cellulitis. Monitor to ensure there is no progression to orbital cellulitis.

Plan:
CT Scan:
- Helps distinguish between periorbital and orbital cellulitis.
- If sinusitis is present on the scan, consider the possibility of orbital cellulitis.
- Imaging studies aim to support the diagnosis of orbital cellulitis and identify abscesses or other complications requiring surgical drainage.

Oral Antibiotics:
- Initial empiric therapy against MRSA:
    - Trimethoprim-sulfamethoxazole (TMP-SMX): One to two double-strength tablets (each tablet contains 160 mg TMP and 800 mg SMX) every 12 hours for one dose.
- Coverage for Group A Streptococci and H. influenzae:
    - Amoxicillin-clavulanic acid (875 mg every 12 hours).

Follow-up:
- Follow-up with a primary care provider within 24-72 hours.
- Return immediately if symptoms worsen or if there is no improvement.
- Hospitalization should be considered if symptoms worsen or fail to improve.