EYECARE REVIEW: HOW TO TRIAGE EYE EMERGENCIES

LEARNING OBJECTIVES

1. Identifying non-Ocular Emergencies from True Ocular emergencies
2. Test and document status of the Four Vital signs of the eye
3. Use the Four vital signs to determine how to best triage the patient

TRIAGE EYE EMERGENCIES

- Prompt recognition and appropriate treatment of ocular emergencies are essential in the primary care setting to prevent a patient from going blind or even death
- Careful eye examination, case history and simple tests (Eye Vital Signs) can help primary care physicians make decisions about appropriate treatment and referral.

THE EYES 4 VITAL SIGNS

- As a medical professional, you will likely be required to take patient vital signs to assess the health of the patient. The same is true when a patient presents with an eye concern. The four Eye Vital signs to assess are:
  1. Acuity for each eye
  2. Confrontation Visual Fields
  3. Pupil evaluation
  4. Ocular movements
FIELD DEFECT: Retinal or Visual pathway?

Visual field defects occur in about 16% of stroke patients of which 8% are Homonymous Hemianopia.

Spontaneous Visual Field Improvement has been reported in about 50% of patients, usually within the first 3-6 months.

The Swinging Flashlight Test

Swinging flashlight test measures both the direct and consensual response of pupil to light.

Steps:

1. First shine light in right eye. This will cause BOTH right and left pupils to constrict via CNIII through Edinger-Westphal nucleus.
2. Then swing pen light to left eye and check to make sure the left eye CONSTRICTS. If it constricts, this means that the Left CN II is intact and is causing a direct pupillary reflex. If it dilates, then this is a sign that the left retina or optic nerve is damaged and is called an Afferent pupillary defect.

17 Year old male stated he woke up with double vision and his mother noticed his pupils are not the same size and his eye is turned out.
22 year old male presents with this story, “About 5-7 guys jumped me on New Years Eve! It’s on the police report. I was defending my GF….” Mom told him he should get his eye checked out.

- **Chemical Burns**
- **Orbital Hemorrhage**
- **Central Retinal Artery Occlusion**

**Chemical Ocular Injury**

- True ocular emergency
- Both acid and alkali burns can be blinding
  - Acid burns tend to coagulate proteins, limiting the depth of penetration.
  - Alkali burns can rapidly penetrate the cornea, causing damage to intraocular structures.
What is the most likely diagnosis?

A 55 year old woman presents with loss of vision in her right eye that occurred suddenly and without pain. Examination reveals a pale, edematous retina with a visible red macula.
45 YR OLD MAN PRESENTS WITH A WATERY, RED EYE WITH DECREASED VISION AND LIGHT SENSITIVITY.

Subconjunctival Hemorrhage

Causes
- Trauma
- Hypertension
- Valsava pressure spikes
- Spontaneous

No treatment
Resolve within 2 weeks
What is the most likely diagnosis?
A 50 Year old woman presents with right eye pain and blurred vision with the perception of “halos forming around objects.” Examination reveals conjunctival injection with corneal clouding and a mid-dilated pupil.

What is the most likely diagnosis?
A 45 Year old female presents describing a non-healing ulcer that bleeds with only mild trauma and states she has lost lashes in the same area.
Traumatic Hyphema

- Disruption of blood vessels in the iris or ciliary body
- Blood in anterior chamber

Temporal (Giant cell) Arteritis

A 40-year-old man with left eyelid edema and pain (worse on eye movement)

Orbital Cellulitis

- Periorbital erythema and edema
- Proptosis
- Restricted extraocular motility
- Decreased visual acuity
- Chemosis
- Fever

- Broad spectrum intravenous antibiotics
- CT scan orbit
- Ophthalmology & ENT consultation
WHAT IS THE MOST LIKELY

59 YEAR OLD FEMALE COMPLAINS THAT THIS MORNING SHE CANNOT SEE, VISION IS BLURRY WITH AND WITHOUT GLASSES, PAIN IN RIGHT EYE, FEELS LIKE SHE IS LOOKING THROUGH A TUNNEL AND SHE HAS A HEADACHE.