



Foundations Frameworks

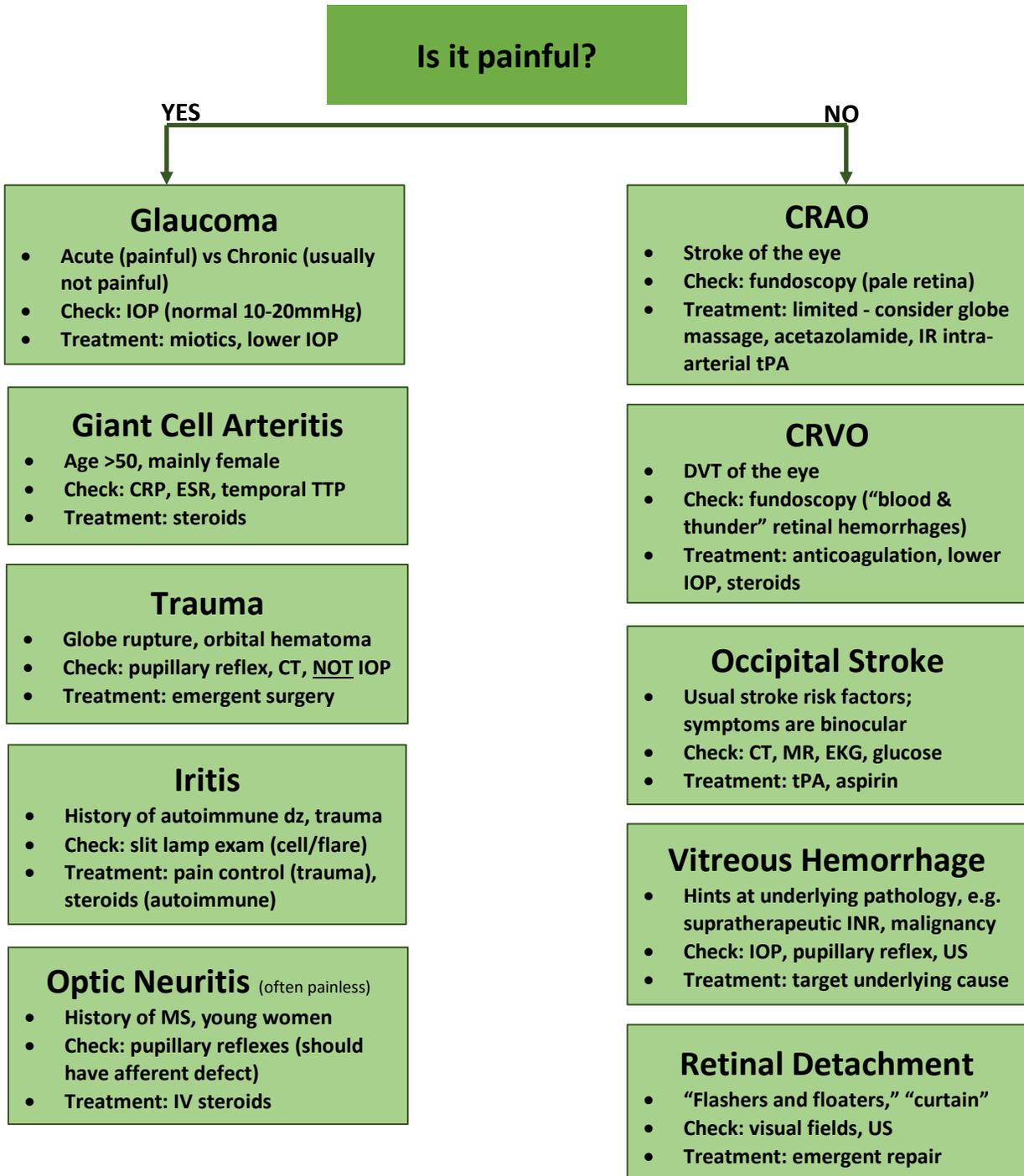
Approach to Vision Loss

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Step 1. Check visual acuities. These are most easily obtainable vital signs of the eye, and they can easily be trended.

Step 2. Narrow down the things you need to worry about.

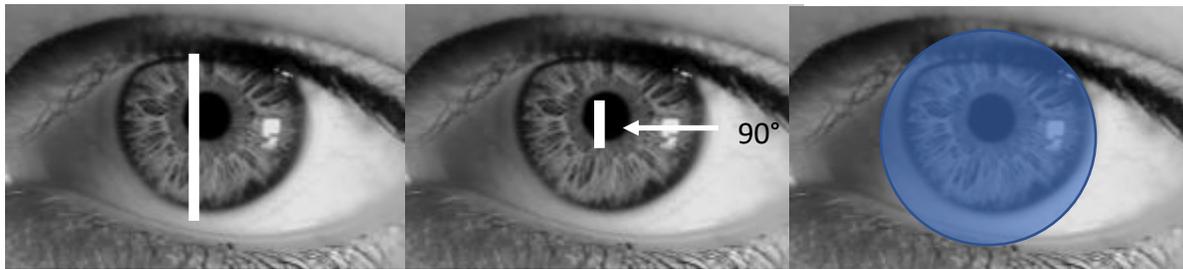


Step 3. Consult ophthalmology, or arrange for urgent followup.

Note that the above diagnoses are all for *acute unilateral* vision loss. Bilateral and chronic or progressive vision loss have much wider differentials, but rarely require emergent management from the standpoint of the Emergency Department.

Also note that patients don't have to have only one disease. For example, trauma can cause both retinal detachment, which is typically painless, and traumatic iritis, which is painful. Make sure you think about everything!

The Slit Lamp Exam:



1. Start with white light, narrow/long beam and directly in front of the eye.

Scan over whole eye, look for corneal FB or infiltrates and opacification, as well as ciliary flush, pupil shape and reactivity

2. Shorten beam and move to 90° lateral to eye, highlighting the anterior chamber.

Look for cell and flare, hypopyon, hyphema

3. Apply fluorescein dye, switch to cobalt blue (dark blue) light, and broaden/lengthen beam.

Look for focal uptake (abrasion, punctate keratitis, "ice skate" tracks, dendrites, ulcer, etc.).

Sources:

Eye image: <https://i.ytimg.com/vi/-01-XBHXFq8/maxresdefault.jpg>

Knoop KJ and Dennis WR. Chapter 62: Ophthalmologic Procedures. *Roberts and Hedges' Clinical Procedures in Emergency Medicine*, 6e. Saunders 2014. 1259-1297.

Guluma K and Lee JE. Chapter 61: Ophthalmology. *Rosen's Emergency Medicine: Concepts and Clinical Practice*, 9e. Elsevier 2018. 790-819.