

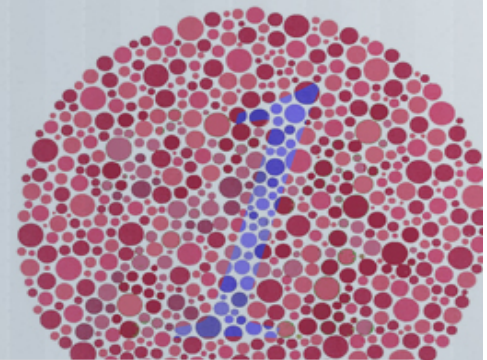
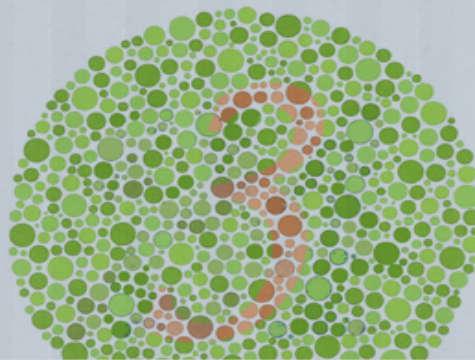
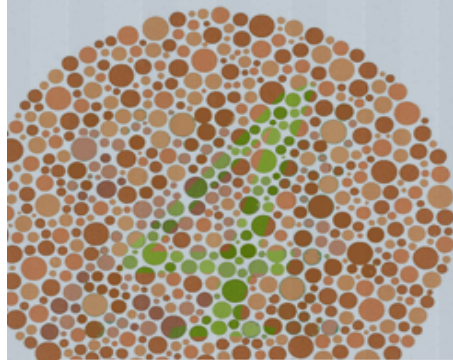
Ocular Emergencies

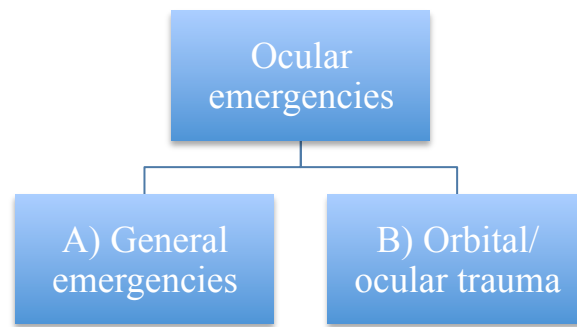


431
Teams
medical students

Ophthalmology Team

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A) General emergencies:

1- Corneal ulcer (=infection in the cornea):

- Most common cause is bacterial, and viral, fungal or parasitic organisms might cause it.
- Patient presents with ocular pain, redness, discharge, decreased vision and hypopyon.
- One of the risk factors to develop corneal ulcer is wearing contact lens, because it will lead to microabrasions that make the stroma easily accessed by the microorganism.
- Management: Do corneal scraping (2 days for results) and start empirical antibiotics. (Why? Because 1) bacterial infections are commoner; 2) it is fast in term of destruction; and 3) response is fast. The eyes cannot stand 2 day without treatment.
- Which features suggest fungal keratitis? 1) Immunocompromised patients (for example diabetics, patients on steroids); and 2) farmers, because their cornea might be injured from tree particles which carry fungi.

Hypopyon: white blood cells in the anterior chamber.



2- Uveitis:

- Most of the cases, cause is unknown (idiopathic). It might be related to other systematic diseases (for example HLA B27, Ankylosing spondylitis, Vogt-Koyanagi-Harada syndrome) or infectious diseases.
- Any patient comes to the emergency with uveitis screen him for Tuberculosis.
- Patient present with pain, photophobia and halos.
- Management: Treat the underlying cause. Topical steroids and topical cycloplegic are used (Why cycloplegics? Because they prevent synechiae formation and relief pain by preventing muscular spasm).

3- Acute angle-closure glaucoma:

- Results from peripheral iris blocking the outflow of fluid.
- Patient presents with severe pain that is exacerbated when dimming of the light (because pupil will dilate and the iris moves periphery and closes the angle), increased intraocular pressure and severe visual loss.
- Management: Starts medically by reducing the intraocular pressure, then surgically by laser iridotomy (to create a shunt) that mostly will be curative.

4- Preseptal cellulitis and orbital cellulitis:

	Preseptal cellulitis	Orbital cellulitis
Presentation	Lid swelling and erythema	Pain, decreased vision, impaired motility, optic nerve swelling
Organism	<i>H. influenzae</i> in patients less than 5 years.	-
Management	Warm compresses (To increase blood supply). Admit the patient if the age is less than 5 year; because of the risk of developing orbital cellulitis.	Admission, intravenous antibiotics, culture.
		

5- Endophthalmitis:

- Could be endogenous (via hematogenous spreading) or exogenous (post-surgical).
- Management: Intravitreal antibiotics injections.

6- Retinal detachment:

- Separation of the inner layers of the retina from the underlying retinal pigment epithelium.
- Patient presents with floaters, a curtain or shadow moving over the field of vision and visual loss.
- If the detachment is located peripherally: good prognosis.
- If the detachment is located centrally: poor prognosis.
- Myopic patients are at risk for retinal detachment because they have breaks at the periphery.

B) Orbital/ Ocular trauma:

1- Corneal abrasions:

- Patient presents with foreign body sensation, pain, tearing and photophobia.
- The epithelium can regrow.
- Management: Topical antibiotics (as a prophylactic). Under no circumstance should topical anesthetic drops be provided for the patient's use, because they delay corneal epithelial healing, mask progression of disease, and if used for a prolonged period can cause a persistent neurotrophic corneal epithelial defect.

2- Chemical injuries:

- The offending agent might be acidic or alkaline.
- Alkali is more dangerous, because the reaction (liquefaction) will continue to cause damage long after the injury is sustained. Acidic injuries will cause a barrier of precipitated necrotic tissue that limits penetration and deep tissue damage.
- Management: Irrigate the eye immediately with water, when the patient comes to the emergency use normal pH saline.

3- Corneal and conjunctival foreign bodies.

- Remove the foreign body and apply antibacterial ointment.
- Iron or copper foreign bodies usually produce a ring of chemical tissue staining "rust ring".

4- Hyphema:

- Blood in the anterior chamber.
- Usually secondary to trauma. It might be spontaneous in blood diseases.

5- Ruptured globe:

- The mechanism could be either severe blunt injury or injury by sharp object.
- Lower Intraocular pressure might be an indication to ruptured globe.
- Patient presents with subconjunctival hemorrhage, uveal prolapse, irregular pupil or intraocular foreign body.
- Management: Close the open wound to prevent infections (endophthalmitis). In severe cases, removal of the eye might be the only management.

6- Orbital fracture:

- Patient presents with enophthalmos (Posterior displacement of the eyeball)
- It does not require immediate surgery.

7- Lid laceration:

- Can result from sharp or blunt trauma.
- Rule out associated ocular injury.

Sources:

- Slides.
- Notes written within the lecture.
- Vaughan & Asbury's General ophthalmology, 18th edition.