

Sympathetic Ophthalmitis

Definition: It is a bilateral granulomatous pan - uveitis.

Aetiology: perforating eye injury with incarceration of the uveal tissue in the wound.

Pathogenesis: Trauma → some pigment from the uveal tract reach the circulation → the body will form antibody against the pigment → these antibodies will circulate in the blood and reach both eyes where they react with the uveal pigment → UVEITIS.

Clinical Picture:

Onset: 4 – 8 weeks after the injury. It may be delayed for many years up to 40 years. The traumatised eye is called “exciting eye”, the other eye is called “sympathising eye”.

Prodromal symptoms: they are better seen in the sympathising eye. The eye becomes irritable and photophobic.

The Full picture:

- 1- bilateral anterior uveitis which may be mild or severe and granulomatous.
- 2- bilateral multifocal choroiditis and exudative retinal detachment may occur in severe cases.

Treatment:

(1) Prophylaxis:

- 1) A hopeless injured eye must be removed.
- 2) Intra ocular F.B. must be removed.
- 3) If the eye is possible to save, all prolapsed uveal tract must be excised and the wound is closed with no incarceration.
- 4) If the injured eye is still inflamed 2 weeks after the trauma we better excise it.
- 5) If prodromal signs appear in the good eye, the exciting eye must be removed.

(2) Treatment of established cases:

- 1) Topical:** treatment of anterior uveitis is with steroids and cycloplegics.

2) Systemic:

- 1- systemic steroids (1 – 2 mg / kg / day).
- 2- Immunosuppressive may be required.

[4] Chemical Injuries

The eye may be injured by the following chemicals:

(1) Acids: sulphuric and hydrochloric acid.

(2) Alkalies: sodium and potassium hydroxide, ammonia, or lime.

(3) Other chemicals: phenol, aniline dye, iodine, and benzene

Clinical Effects:

(1) Immediate effects: (depends on the amount and concentration of the chemical agent and the duration of exposure).

- 1) **Eye lids:** burns with dermatitis and blepharitis.
- 2) **Conjunctiva:** Hyperemia, chemosis, and necrotic areas.
- 3) **Cornea:** 1- oedema, ulceration, necrosis, and sloughing.
2- vasularized scarring on healing.
- 4) **Intra ocular changes:** 1- hyphema, miosis, and irido cyclitis.
2- secondary glaucoma.

(2) Delayed effects:

- 1) **Eye lids:** cicatricial entropion or ectropion, epiphora,
- 2) **Conjunctiva:** Xerosis, and symblepharon.
- 3) **Cornea:** corneal opacities and ectasia.
- 4) **Intra ocular changes:** irido cyclitis, secondary glaucoma, atrophial bulbi.

Treatment:

(1) First aid treatment:

1) If the chemical substance is known: its specific antidote is used to wash the conjunctival sac.

1- Acids: weak alkaline as sodium bicarbonate.

2- Alkalies: weak acid as boric acids 4% or milk.

3- Lime: a- Pick with a forceps any remaining particle.

b- avoid water.

c-- solution of sodium salt of ethylene diamine tetra acetic acid (EDTA).

d-- if EDTA not available → saturated solution of sugar.

4- Iodine: starch or milk.

5- Aniline dyes: wash with a weak solution of alcohol 10% then use glycerin drops 10%.

2) If the chemical substance is unknown, or the specific antidote is not available: 1- sterile saline solution.

2- tap water.

3- milk.

(2) Local medications:

- 1) Antibiotic eye ointment:** to prevent infection.
- 2) Atropine eye ointment:** for corneal burns.
- 3) Steroid eye ointment:** to diminish the inflammatory reaction and adhesion.

(3) Prevention of symblepharon:

- 1) Steroid eye ointment.
- 2) Glass rod coated with antibiotic ointment is passed in the fornices 1 – 3 times daily.
- 3) Soft contact lens.

(4) Treatment of complications:

- 1) Secondary glaucoma:** 1- Diamox (early).
2- Trabeculectomy (late).
- 2) Corneal opacities:** keratoplasty.