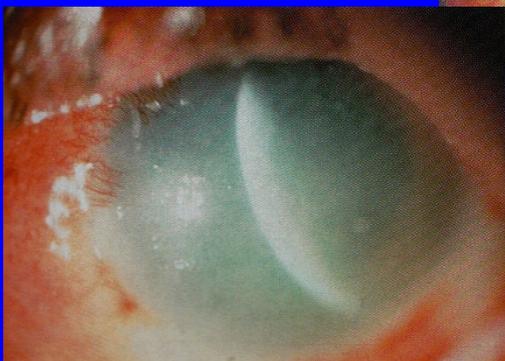
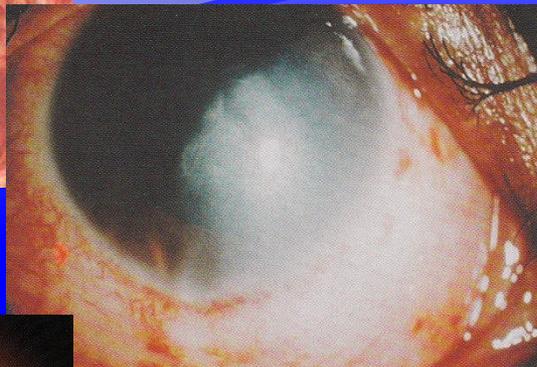


# Chemical injuries

- ◆ Etiology:
  - ◆ Acid burns (liquefaction necrosis) and alkali burns (coagulation necrosis)
  - ◆ Clinical manifestations  
According to the intensity of impact the degree of necrosis - adnexa – conjunctiva- cornea anterior uveal irritation
- ◆ Treatment
  - ◆ First aid ( mechanical removal of noxy , intensive water rinses )  
surgical - removal of necrotis tissue
  - ◆ Complications: symblefara, leucoma, secondary glaucoma

## Chemical injuries



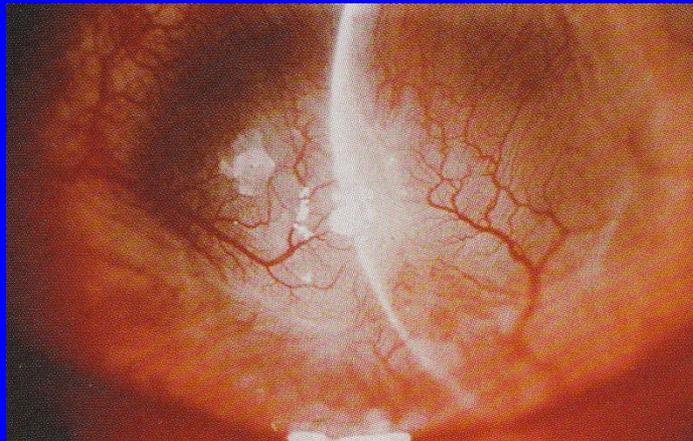
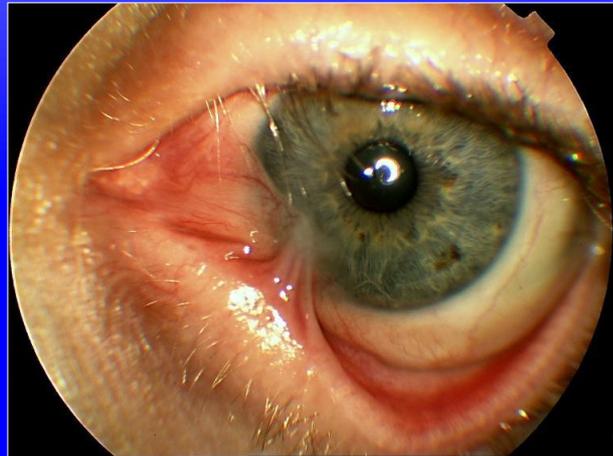
## Thermal injuries

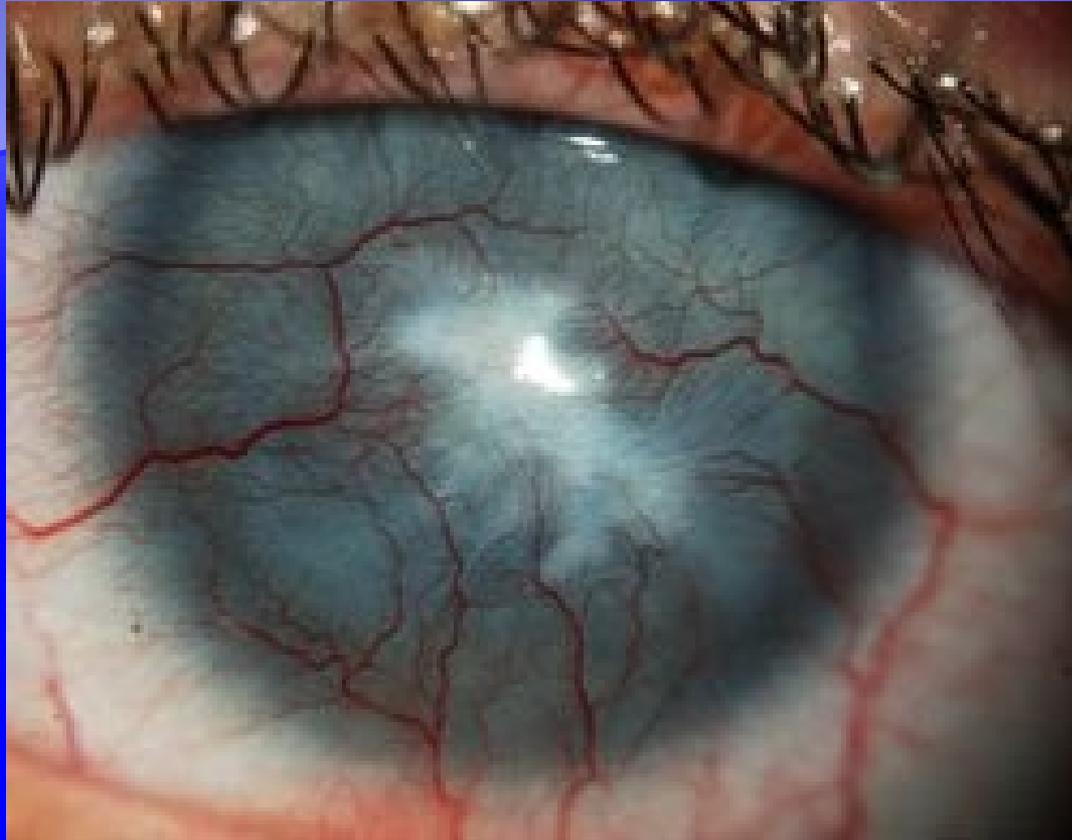


# Thermic injuries

- ◆ Etiology:
- ◆ Effect of high temperature (explosion, burning, liquid, steam) IR and UV radiation.
- ◆ Clinical manifestations  
Depending on the degree of intensity of acting noxy I. - IV.  
degree burns (adnexa, conjunctiva, cornea).
- ◆ treatment
- ◆ First Aid - cold compresses,
- ◆ Targeted therapies - according to the degree of disability  
medical or surgical (necrosis)  
Complications:
- ◆ Scarring (eyelid and conjunctiva) and vascularization (cornea)

# Complications





# Tear gas and electric injuries

- ◆ Tear gas substances  
Gases , sprays, liquids

Electricity

- ◆ Clinical manifestations  
Blepharospasm , epiphora  
, conjunctivitis , corneal  
epithelial damage

The combination of  
thermal changes in the  
anterior segment of the  
eye, cataract formation

- ◆ Treatment: topic ATB  
epitelizancia

# Radiation damage

- ❖ Infrared radiation - heat damage
- ❖ UV radiation (electric arch, germicidal emitters, sunray, stay in the alpine environment - snow) - Ophthalmia ELECTRICA  
Ophthalmia nivalis
- ❖ Eyelid erythema, blepharospasm, epiphora, foreign body sensation, pain, corneal epithelial defects (mikroerosions).
- ❖ Treatment - short term local anesthetics, antibiotics, epithelization
- ◆ Ionizing radiation - secondary damage to the eye during irradiation within the Cancer Therapy.
- ◆ Like symptoms of electric ophthalmia
- ◆ Cataractogenic effect - local therapy of orbital tumors (doses above 30 Gy).
- ◆ Damage laser radiation - depending on the energy, wavelength and focusing - damage to the retina (scarring).
- ◆ Damage to sunlight - solar retinopathy (eclipse of the sun) - damage to the macula.