**Classification of Chemical Burns**

Grade 1: corneal epithelial damage but no limbal ischemia: good prognosis
Grade 2: cornea hazy but iris details seen, 1/3 limbal ischemia: good prognosis
Grade 3: total loss of epithelium, stromal haze & no iris details, 1/2 ischemia: guarded prognosis
Grade 4: opaque cornea, no view of iris or pupil 360 limbal ischemia: poor prognosis

**Other Medical Treatment**

- Therapeutic soft contact lens, collagen shields, amniotic transplant or tarsorrhaphy
- Intravenous Ascorbate and citrate for alkali burns
- Tetracycline: oral
- If melting of cornea, collagenase inhibitors or cyanoacrylate tissue adhesive if perforation
- Long term follow-up: Severe dry eye treatment, limbal stem cell transplantation from the fellow eye if poor healing

- **Surgery:** patch graft or transplant
Phone Call – Chemical Burn

- Name and telephone number
- Brief history – what chemical, what has been done, how long
- Instruct pt to flush eye with water for 20-30 mins – sink, shower, hose, drinking fountain
- Call back in ½ hr.
- If don’t know type of chemical ie. Acid vs alkali call poison control number

Super Glue Injury to the EYE

- Rapid setting super glue hardens quickly on contact with moisture
- Treatment:
  - If eyelids are glued together, they can be separated with gentle traction, may need to remove eyelashes
  - Remove hardened glue from conjunctiva & cornea
  - Epithelial defects are treated as corneal abrasions
  - Warm compresses may help remove remaining glue stuck to lashes
Thermal/ Radiation Burns

- Thermal – cinders, soldering irons, curling irons
- Radiation- UV, sunlamps, welding or ionizing
- Symptoms- Moderate to severe ocular pain, FB sensation, red eye, tearing, photophobia, blurred vision---- symptoms are usually worse 6-12 hrs after exposure
- Signs—Interpalpebral SPK (diffuse staining), microcystic edema, conjunctival injection, eyelid edema, miotic pupils

Continued------

- Differential dg- Toxic, chemical keratitis, exposure keratitis, nocturnal lagophthalmos
- Work -up detail history and slit lamp exam
- Treatment— cycloplegic- 5% homatropine bid, Antibiotic ointment ie erythromycin pressure patch x 24 hrs -concern about bilateral patching
- Oral pain medication
- Topical NSAIDS for pain
- F/U in 24 hrs artificial tears prn