2016 Week 2

Corneal Ulcer Culture Collection & Foreign Body Removal
Collection of corneal ulcer specimen

- Entering acuities
- Thorough SLE; anesthetic likely necessary for SLE & definitely for corneal ulcer scraping
- Red eye case hx
- Measure all parameters of lesion exactly
How do we collect it?

Traditionally for non-ocular:

- Culturette transport swab

Not generally recommended for ocular as organisms tend to die off before being plated.
Select most appropriate tool for collection

- Collect with sterile spatula, small tip ca alginate or dacron swab, sterile needle, jewelers forceps or other sterile tool, if foreign body may consider spud
- Choose size appropriate tool
- Kimura or needle usually best for corneal ulcer
Mini-tip Culturette

- Some sources say > success than with standard culturette
- Nothing magical-just a small tip swab+ transport media
Direct in-office inoculation on 5%SB, chocolate agars, thioglycollate broth, scraping for gram stain, Sabouraud agar if fungal suspected but fungus may also grow on chocolate & sheepsblood
Collection Procedure

- Topical anesthetic required
- Steady your hand on headrest, patient’s face, etc. May need support under your elbow.
- Try to use your right hand for patient’s left eye & vice versa
- Hold lid if needed
- Hold instrument parallel to cornea not straight on
- Basic technique same as for foreign body removal
Focus instrument in SL prior to touching cornea

When focused on corneal plane scrape lesion using motion away from cornea and do not scrape in direction of uninvolved cornea.

Preferred to use your left hand for their right eye and vice-versa.
Corneal ulcer continued

Sample leading edge & bed
If elevated remove surface debris prior to scrape
Apply specimen to culture plates, slides, or transport media
Transport immediately to lab
Apply to separate set of culture plates to avoid cross contamination

IF USING NEEDLE OR SPUD MUST TRANSFER TO SWAB TO STREAK Cs

Inoculate as horizontal rows of C. Each row represents a deeper layer of scraping
Coding

- Dx code must be one for a condition that correlates with need for culture or smear
  - Conjunctivitis, corneal ulcer, etc
- CPT for smear or culture is 65430
Send a scraping for gram stain along with the culture
Foreign Body Removal

- Case hx
- When did it occur
- What were they doing when it occurred
  - At work?
- What type material is the FB
- Was it propelled
- SXS
Foreign Body Removal

- Select tool based on size and depth of the foreign body.
- Cotton swab: not effective unless very superficial FB, may cause increased abrasion size due to swab tip size
- Gentle irrigation at angle to FB may work if very superficial
Most Effective Tools

- **Spud**: sharp edged golf club shaped
- **Kimura spatula**: too large for most FBs
- **Swab**: only if very superficial
  - May cause collateral abrasion
- **25-27 gauge sterile hypodermic needle**
  - Can use with or without syringe
  - Causes very little surrounding tissue damage
Technique

- Prior to removal, stain corneas, evert upper lids
- Technique is same as for culture collection
- Direct pressure aiming the pointed tip at the cornea is CONTRAINDICATED
- Always hold instrument parallel to cornea with needle bevel facing Dr.
- Place beveled edge under edge of F.B. & lift FB off moving anteriorly
Rust Ring

- May be removed same day or later
  - Alger Brush
  - Needle or spud
  - Do not have to remove if will cause more damage.
After removal

- Consider cycloplegia if indicated
- RX topical antibiotic such as moxiflocacin
- In some cases **may** consider bandage soft lens or pressure patch if indicated
- See again in a few days. Most epithelial defects heal in 1-2 days
- CPT: Numerous codes depending on depth and method of removal