Case Studies in ASD

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Patient comes in with red, painful eye
Eye feels like something in it x 2 days

- VA 20/20 OU
- Entrance NL
- OH: Unremarkable
- MH: None

When doing SLE, what is the most important thing to do?

Rule Out Ocular Penetration

How to rule out ocular penetration

- History
- Dilation
- Bscan?

Slit Lamp Exam - Abrasions

- See how close abrasion is to visual axis
- Check to see how deep the abrasion is

Management

- Topical Antibiotics at least QID until resolution
- Consider an antibiotic ointment at bedtime
- Cycloplegic agent
- Consider bandage CL

Corneal Abrasion

- What if the abrasion is central, how does your management change?

For central abrasions

- Or, you and instill loading dose of topical antibiotics and then Rx both the antibiotic and topical steroid
- Document to the patient the potential for loss of BCVA even if everything goes 100% as planned

My protocol for central abrasions

- Instill antibiotic drop q 5 min for 30 min while patient is still in office
- Then I send patient home with:
  - Hourly topical antibiotics
  - TID topical steroid
  - Cycloplegic agent
  - Antibiotic ung QHS
  - Oral OTC pain medications
  - RTO 24 hours follow up

Patient may have RCE

What are risk factors for RCE?

- Manage with Muro 128
  - Drops during the day
  - Ointment at bedtime

Epithelial Debridement

- Loosely adherent epithelium is debrided using a surgical sponge, spatula, or surgical blade

Anterior Stromal Puncture

- Numerous small punctures through the epithelium and Bowman's layer into the anterior stroma.

Excimer Laser Phototherapeutic Keratectomy

- The objective of PTK is simply to remove enough of the superficial Bowman layer to permit formation of a new basement membrane with adhesion structures
- The ablated anterior corneal stromal surface appears to be highly supportive of stable reepithelialization

Doxycycline

- **DRUG CLASS: Systemic tetracylines**
  - MMP is upregulated in epithelial specimens of pts with recurrent erosion
  - MMPs alter the epithelial basement membrane during wound healing

Amniotic membrane

Amniotic membrane is an avascular fetal membrane that lies deep to the chorion and is harvested in a sterile environment from placental tissue obtained during elective cesarean sections.

Donors are screened for transmissible diseases, and the AM is further treated with broad-spectrum antibiotics immediately after collection.

Beneficial Properties of AM

- Acts as a physical barrier to protect conjunctival and corneal epithelium as it heals, and it reduces pain caused by friction of the eyelids over the surface.
- The AM basement membrane promotes epithelial growth through cell migration, adhesion, and differentiation, while also inhibiting cell death.
- The stroma of AM, which contains fetal hyaluronic acid, inhibits fibroblast growth and reduces inflammation through decreased expression of cytokines.

Types of AM on the market

- **Cryopreserved AM.**
- Involves slow freezing at –80°C using DMEM/glycerol preservation media to allow for slow-rate freezing without ice formation. The tissue is stored in a –80°C freezer and brought to room temperature when needed for use.
- ProKera (BioTissue) is a cryopreserved form of AM in which the membrane is secured around a polycarbonate ring or an elastomeric band. This form of AM has been cleared by the FDA as a class II medical device, and product claims approved by the FDA include protective, wound healing, and antiinflammatory effects.

Types of AM on the market

- **Dehydrated AM.** Dehydrated AM is preserved using vacuum with low temperature heat to retain devitalized cellular components. FDA-approved claims for this type of AM are limited to wound coverage. Unlike cryopreserved tissue, dehydrated AM is kept at room temperature, but it must be rehydrated for clinical use.
- AmbioDisk (IOP Ophthalmics) is a dehydrated AM commercially available for in-office use; it is applied directly to the ocular surface and covered with an overlying bandage contact lens.

Billing:
Amniotic membrane

- CPT 65778 (Placement of amniotic membrane on ocular surface without sutures)
- Cost: $400 to $800
- Reimbursement: $1000 to $1400

How much do you remove?

- None
- All
- Somewhere in between

Do you need to get it all?

- Depends on who you ask?
- My general rule: Get roughly 80% or as much as I can in 2 separate visits

What's Your Diagnosis?

Your patient has a hyphema

For patients who come in with a diagnosis

Never trust the previous doctor – run your own tests and draw your own conclusions

What if it had been a Subconjunctival Hemorrhage?

- Can occur secondary to blunt trauma or can be spontaneous
- History of severe coughing or sneezing, heavy lifting, vomitting
- Risk Factors:
  - Diabetes
  - Hypertension
  - Blood thinners – Coumadin, aspirin

Management of subconj heme

- ?Temporarily discontinue aspirin, coumadin
- Artificial tears
- If looks atypical, dilate patient
- If recurrent, consider medical workup
- Patient assurance

Clinical Aspects of Hyphema

- Associated with a marked elevation in IOP with sudden distortion of intraocular structures
- Typically caused by trauma

Grading Scale for hyphema

- Grade 1 - Layered blood occupying less than one third of the anterior chamber
- Grade 2 - Blood filling one third to one half of the anterior chamber
- Grade 3 - Layered blood filling one half to less than total of the anterior chamber
- Grade 4 - Total clotted blood, often referred to as blackball or 8-ball hyphema

Work Up:

- Complete dilated fundus examination to rule out retinal involvement and trauma to retina
  - Order CT scan and/or B-scan if poor fundus view

Management of Hyphema

- Bed rest with elevated head
- No aspirin-containing products
- Atropine 1% drops 3-4 times per day
- Eye shield (no patching)
- No physical exercise
- Check for IOP spike

Manage as inpatient or outpatient?

- Grade 1 or 2 – outpatient
- Grade 3 or 4 – in patient

Let's talk about pterygium

What are the Risk Factors?

- Increased exposure to sun light
- Living in subtropical and tropical climate
- Engaging in activities which require outdoor activities with no UV protection

Work up for these patients

- Patient history
- Slit Lamp examination
- External photography
- Corneal topography

Topography and Pterygium

Ant Seg Photography

Criteria

- - provide additional information not obtained during the exam
  - aid in diagnosis and treatment of a disease or condition
-
  - are taken to assist in assessing disease progression.

For $200…

- Can use photos to help educate patients (remember a pix is worth 1000 words)
- 8 patients and you are even. The rest is profit

To be compliant…

- A device dedicated to ant seg photography where you can store photos indefinitely
- Download immediately for storing and/or printing and then delete from device

Management Options

- Aggressive lubrication
- UV-blocking sunglasses or contact lenses
- Topical steroids
- Surgery

When does this require surgery?

- Patient wants it
- Impacting vision
- Will encroach on visual axis soon

What to tell your patient

- High recurrence rate
- Long and painful post op period

Wound Closure Options:

- Bare sclera
- Simple closure
- Conjunctival graft

Bare Sclera Closure

- No sutures or fine, absorbable sutures used to appose conjunctiva to superficial sclera in front of rectus tendon insertion
- Leaves area of “bare sclera”
- Relatively high recurrence rate

Simple Closure

- Free edges of conjunctiva secured together
- Effective only if defect is very small
- Can be used for pingueculae removal
- Few complications

Conjunctival Graft Closure

- A free graft, usually from superior bulbar conjunctiva, is excised to correspond to wound and is then moved and sutured into place
- Can be performed with inferior conjunctiva to preserve superior conjunctiva

Adjunctive Beta Irradiation

- Most common dosage is 15 Gy in single or divided doses
- Reasonably acceptable recurrence rates (from 0 – 50 % with bare sclera or simple conj closure)
- Risk of corneal or scleral necrosis and endophthalmitis

Adjunctive Mitomycin C

- Used with bare sclera or conj closure
- Most common dose is 0.02 % applied for 3 min during surgery
- Risk of aseptic scleral necrosis / perforation and infectious sclerokeratitis
- Used more often for recurrent cases

- Medical negligence
  - Failure to meet the standard of practice of an average qualified physician practicing in the specialty in question

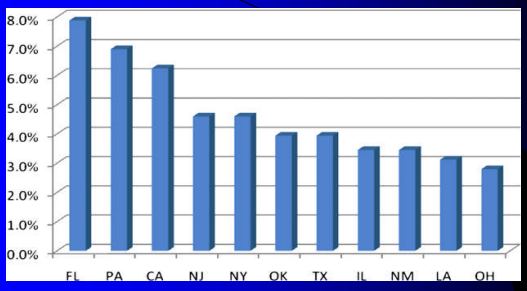
❖*Occurs not merely when there is an error, but when the degree of error exceeds the accepted norm*

What is standard of care?

- the watchfulness, attention, caution and prudence that most doctors in the circumstances would exercise.
- If a doctor's actions do not meet this standard of care, then his/her acts fail to meet the duty of care which is required for health care providers

5 Steps of the legal elements of a Negligence Claim

- A Physician-Patient Relationship
- The Provider Owes a Duty (of reasonable care) to the Patient
- The Physician's conduct was below acceptable Standards of Care
- The Patient was injured (damages)
- The Negligence was the "Proximate Cause" of the patient's damages.



In any given year, 99.9 percent of us are practicing good optometry….

Or at least not getting caught practicing bad optometry

Lifetime Risk for Getting Sued

6%

Presbyopia and CL

3 Options in Contact lenses

- Distance only with reading glasses
- Monovision
- Bifocal CL

Bifocal contact lenses: Patients don't know

- Once multifocal contact lenses were discussed most people were interested in trying them
  - 75% of contact lens wearers
  - 60% of spectacle wearers
- The vast majority did not know they exist

Increased Chair Time

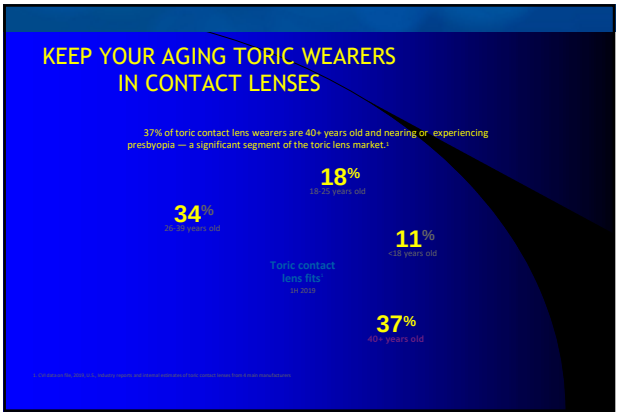
- Average Bifocal CL Fit: 2.9 visits
- Very easy to fix:
  - Set your fees accordingly

Poor Optics

- Also easy to fix:
- Set the proper expectations for your patient:
  - Would you be able to accept a CL that meets 80% of your visual needs?

What if he had astigmatism?

- Proclear Toric Multifocal
- B&L Ultra Multifocal for Astigmatism
- Biofinity Toric Multifocal


KEEP YOUR AGING TORIC WEARERS IN CONTACT LENSES
37% of toric contact lens wearers are 40+ years old and nearing or experiencing presbyopia — a significant segment of the toric lens market.1
18%
18-25 years old
34%
26-39 years old
11%
<18 years old
Toric contact lens fits*
1H 2019
37%
40+ years old