Morning report: january 28, 2015

Avni shah, pgy-2  preceptor: Dr. Erlanger
H&P

• CC: blurry vision
• HPI: 64 y/o AAM with DM2, h/o refractive error presents to VA eye clinic with blurry vision in both eyes. Feels vision has gradually deteriorated in both eyes. No irritation, redness, or pain.
• PMH: HTN, DM2, no known history of retinopathy
• POH: refractive error
• Meds: HCTZ, lisinopril, metformin, glyburide
• ROS: negative for joint pains, rash, and GI complaints, no recent URI or sinus disease
H&P

- VA: R 20/70+1  L 20/70+1
- MRx:
  R  -1.75 +2.00 x 085    20/30-
  L  -1.00 +1.25 x 110    20/40-
  Add: +2.25 OU
- Pupils: 3 mm > 2 mm OU, no APD
- IOP: R 18  L 17
- EOM full R and L.
- VF full to confrontation R and L.
Slit lamp exam
topography

44.62D @90
42.50D @180

44.37D @120
43.37D @30
Differential Diagnosis

• Terrien’s Marginal Degeneration
• Inflammatory PUK (RA, GPA/Wegener’s, IBD, PAN, SLE, Sarcoid, Behçet’s)
• Mooren’s Ulcer
• Other infectious keratitis (Strep, Gonococcus, Syphillis, TB, Moraxella, Haemophilus, HSV, VZV, fungal)
• Staph Marginal Keratitis
• Senile Furrow Degeneration
• Contact Lens use
• Dellen
Further workup

- RF – wnl
- ANA – wnl
- ANCA – negative
- RPR – nonreactive
- ACE – wnl
Terrien’s Marginal Degeneration

- First described by Terrien in 1900
- Idiopathic, clinically noninflammatory, painless
- Slowly progressive peripheral corneal stromal thinning
- Typically unilateral or asymmetrically bilateral
- Onset as early as second or third decade of life
- Can be localized or involve extensive portions of peripheral cornea
- Typically begins superiorly and progresses circumferentially, rarely involves inferior limbus or central cornea
TERRIEN’s marginal degeneration: Clinical features

• Thinned edge with steep central wall and gradually sloping peripheral wall
• No epithelial defect
• Fine *vascular pannus* traverses thinned areas with *lipid deposition* at the leading edge of the pannus
TERRIEN’S MARGINAL DEGENERATION: PATHOLOGY

- In vivo confocal microscopy of affected corneas have shown distinct ultrastructural changes that support a subtle, subclinical mild inflammatory state.
  - Decreased nerve fibers in sub-basal nerve plexus, dendritic cells
  - Nonhomogenous hyperreflective material deposition
  - Irregularly organized Bowman’s
  - Activated keratocytes, honeycombing
TERRlen’s MARGINAL DEGENERATION: presentation

• Typical presentation - our patient
• Other possible presentations:
  • Fuchs superficial marginal keratitis – inflam variant
    – +/- pseudopterygium
  • Spontaneous corneal perforation
  • Spontaneous filtering bleb
  • Acute hydrops
Differential diagnosis

Inflammatory PUK
Systemic association: RA, GPA/Wegener’s, IBD, PAN, SLE, Sarcoid, Behcet’s
usually unilateral, de-epithelialized
adjacent conjunctiva inflamed
flares correlate with disease activity
Differential diagnosis

Mooren’s Ulcer
painful, progressive, idiopathic
autoimmune, possible hx parasite, possible association with HCV
leading edge de-epithelialized
unilateral (older population), bilateral/rapid (West African males)
Differential diagnosis

Staph Marginal Keratitis

marginal infiltrates with peripheral clear zone
chronic disease – stromal opacities, peripheral thinning, pannus following resolutions of acute infiltrates
Differential diagnosis

Senile Furrow Degeneration
in lucid space peripheral to arcus
Thinning apparent more than real
no inflammation or vascularization
vision not affected
Management of TMD

• Surface lubrication
• Correction of refractive error caused by astigmatism with glasses or RGP lenses
• Corneal collagen cross-linking – shown to reverse thinning at 5 yr follow-up
• Crescent-shaped lamellar or full-thickness corneoscleral patch grafts
• Annular lamellar grafts for 360° thinning
Cataract surgery

- Care must be taken during surgical planning to note areas of peripheral corneal thinning.
- If thinning involves superior/temporal limbus, suture placement or scleral wound are surgical options.

Our patient: s/p CE/IOL left eye 5 years ago with 10-0 nylon placed through inferotemporal paracentesis, stable post-op MRx and topography.
- Now POD#2 s/p CE/IOL right eye via normal approach (main wound 10:00) as superior and temporal limbus unaffected.
Take home points

• Consider TMD in patients with painless peripheral corneal thinning, *even if the superior limbus is spared*

• TMD can present atypically as pseudopterygium, spontaneous corneal perforation, spontaneous filtering bleb, and acute hydrops

• If eye appears painful or inflamed, consider other causes of PUK including systemic inflammatory disease, Mooren’s ulcer, infectious keratitis, and Staph marginal disease

• Be careful to note areas of peripheral corneal thinning when planning cataract surgery
References

• Munro M et al. Two cases of spontaneous filtering blebs, one idiopathic and one associated with Terrien marginal degeneration. Cornea. 2014 Jul;33(7):752-4.