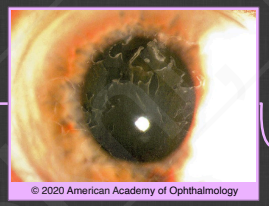
Recurrent Corneal Erosion

Case Description
40-year-old woman complains of recurrent episodes of eye pain, foreign body sensation, and tearing upon opening her eyes in the morning

Image Description


anterior segment photography using sclerotic scatter demonstrates characteristic geographic maps

Differential Diagnosis
- anterior corneal dystrophy
  - epithelial basement membrane dystrophy (MDF corneal dystrophy)
  - others
    - Meesman
      - subepithelial dystrophy
    - Reis-Bucklers
      - Bowman membrane dystrophyies
    - Thiel-Behnke
- stromal corneal dystrophy
  - lattice
  - granular
  - macular
- trauma/surgery
  - may have happened years before
- diabetes
- corneal degeneration
  - band keratopathy
  - Salzmann nodular degeneration

Data acquistion
- History
  - medical history
    - diabetes
  - ocular history
    - previous similar episodes
    - eye trauma/surgery or corneal abrasion
  - family history
    - family history of corneal dystrophy
- Physical Exam
  - slit lamp examination
    - signs of corneal dystrophy
      - ❗ examine both eyes
    - corneal fluorescein staining
      - abrasion
        - negative or positive abrasion
      - heaped up epithelium

Additional Testing

Assessment
recurrent corneal erosion secondary to epithelial basement membrane dystrophy

Treatment
- Medical
  - acute
    - artificial tear ointment at bedtime
    - artificial tear drops
    - antibiotic ointment
    - until epithelium heals
      - cycloplegic eyedrop
      - pressure patch
      - bandage contact lens
    - for larger defects
  - chronic
    - sodium-chloride ointment at bedtime
    - sodium-chloride drops
    - low-dose oral doxycycline
    - short-term topical steroid
    - treat x 3-6 months
- Surgical
  - bent 30-g needle
  - Nd:YAG laser
  - anterior stromal puncture
    - traumatic cases outside visual axis
  - cellulose sponge or diamond burr
  - epithelial debridement
  - hyperopic shift
  - PTK
    - large abnormal areas in visual axis

Patient Education
- General
  - explain pathophysiology
- Prognosis
  - good
- Course
  - complete healing may take a few months
    - use ointment for 3-6 mo after healing
  - may recur
- Follow-up
  - q 1-2 days until epithelium heals
  - then 1-3 months

Ophthalmology Mind Maps/Arman Mashayekhi, MD