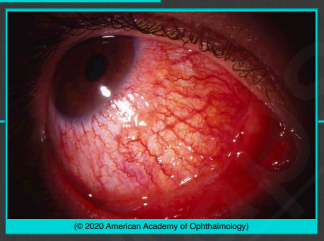
Scleritis

Case Description
40-year-old woman complains of diffuse redness and severe boring pain of her right eye that radiates to her right forehead

Image Description


diffuse redness of right eye with congested scleral vessels that have a crisscross pattern

Differential Diagnosis
- scleritis
  - associated diseases
    - infectious
      - syphilis
      - tuberculosis
      - herpes zoster
      - lyme disease
      - "cat-scratch" disease
      - leprosy
    - autoimmune connective tissue diseases
      - rheumatoid arthritis
      - systemic lupus erythematosus
      - seronegative spondyloarthropathies (eg, ankylosing spondylitis)
      - wegener granulomatosis
      - polyarteritis nodosa
      - giant cell arteritis
      - relapsing polychondritis
    - 1/2
      - gout
- episcleritis
  - younger
  - milder
  - more acute
  - ★ vessels blanch with topical phenylephrine (2.5%)
- conjunctivitis
- orbital cellulitis/orbital pseudotumor
- ciliary body tumors
- VKH
  - resembles posterior scleritis

Data acquisition
- History
  - medical history
    - ★ systemic immune-mediated diseases
    - foreign travel
      - TB
    - STD
      - syphilis
  - ocular history
    - onset/course of symptoms
      - eye pain
        - boring
        - awakens patient from sleep
        - increases with eye movement
        - increases with touch
        - radiates to forehead & jaw
      - decreased vision
    - ★ prior episodes
    - ★ ocular trauma/surgery
- Physical Exam
  - VA
  - IOP
  - scleral vascular congestion
    - bluish hue in natural light
      - examine under natural light or adequate room light
    - slit lamp exam with red-free filter
    - does not move with cotton swab
    - ★ does not blanch with 2.5% phenylephrine
  - ★ nodules
  - ★ scleral thinning
  - ★ peripheral keratitis
  - AC rxn
  - cataract
  - ciliary body tumor
  - posterior scleritis
    - subretinal granulomas
    - choroidal folds
    - exudative RD
    - optic disc swelling
    - hyperopia

Treatment
- Medical
  - oral steroid
    - start at 1 mg/kg daily and then taper within the first 2 weeks of treatment
      - taper slowly
    - calcium (600 mg) with vitamin D (400 IU)
    - gastroprotective medication
    - NSAIDs and steroids should not be used simultaneously
  - immunosuppressive therapy
    - if
      - unresponsive to oral steroid
      - requires >7.5-10 mg prednisone/day for long-term control
    - MTX, cyclophosphamide, etc
  - subconjunctival steroid
    - not for necrotizing scleritis
    - for patients who cannot tolerate systemic treatment
  - oral NSAIDS
    - only one NSAID should be prescribed at a time
    - gastroprotective medication
    - not responsive to NSAID
      - decreased pain is first sign of response to treatment
    - indications
      - severe disease
        - severe nodular scleritis
        - necrotizing scleritis
        - sclerokeratitis
  - difluprednate eyedrop
  - artificial tears
- Surgical
  - scleral patch graft
    - for scleral thinning
    - after inflammation subsides
- Referrals
  - refer to internist or rheumatologist for systemic work-up
    - up to 50% have systemic disease

Patient Education
- General
  - association with systemic disease
- Course
  - recurrent episodes common
- Prognosis
  - generally responds to treatment
  - necrotizing scleritis associated with high mortality
    - coronary arteritis
    - cerebral angiitis
- Complications
  - scleral thinning
- Dos
  - ★ protective eyeglasses for scleral thinning

Assessment
- scleritis, diffuse

Additional Testing
- systemic workup
  - CBC, diff, ESR, CRP
  - RA
    - RF
  - Wegener's
    - ANCA
    - U/A
    - creatinine
  - PAN
    - ANCA
  - SLE
    - ANA
  - ankylosing spondylitis
    - sacroiliac x-ray
    - HLA-B27
  - gout
    - uric acid
  - infections
    - syphilis
      - RPR or VDRL/ FTA-ABS or MHA-TP
    - lyme
      - lyme antibody
    - TB
      - PPD, CXR
    - herpes zoster
    - atypical mycobacteria
    - fungi
    - nocardia
    - pseudomonas
    - culture/staining for infectious agents
- B-scan
  - ciliary body tumor
  - posterior scleritis
- IVFA
  - posterior scleritis

Ophthalmology Mind Maps/Arman Mashayekhi, MD