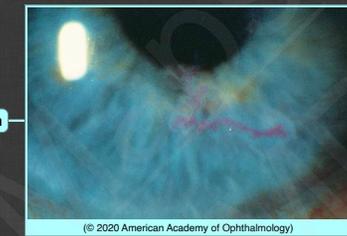


HSV Keratitis

Case Description

young woman with unilateral eye redness and foreign-body sensation and no history of eye trauma

Image Description



rose bengal staining of arborizing dendritic epithelial ulcer with terminal bulbs

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Differential Diagnosis

- HSV
- VZV
 - acanthamoeba keratitis
 - CL wear
 - severe pain
 - healing corneal epithelial defect/recurrent corneal erosion
- AR
 - tyrosine aminotransferase deficiency
 - increased serum tyrosine levels
 - tyrosinemia type II
 - skin lesions on palms and soles
 - intellectual disability
 - avoid phenylalanine and tyrosine

History

- medical history
 - precipitating factors
 - fever, stress, sunlight exposure, trauma/surgery
 - immune deficiency
 - recent systemic steroid
 - recent sexual contacts
- ocular history
 - onset & course of symptoms
 - pain
 - redness
 - photophobia
 - tearing
 - FB sensation
 - FB sensation upon awakening
 - previous episodes
 - periocular vesicles
 - CL wear
 - recent eye trauma/corneal abrasion

Data acquisition

- periorcular vesicles
 - dermatomal in VZV
 - moderate to severe pain
 - not dermatomal in HSV
 - concentrated around the eye
 - both upper and lower lids
- follicular conjunctivitis
- fluorescein and rose bengal staining
 - shape
 - macropunctate
 - dendritic
 - geographic
 - HSV dendrites stain with both
 - VZV dendrites stain best with rose bengal
 - look for terminal bulbs
 - VZV has no terminal bulbs
- ghost dendrites
- corneal sensation
 - decreases in HSV keratitis
- stromal keratitis
- AC reaction
 - measure IOP
- retinitis

- Additional Testing
 - if diagnosis in doubt
 - corneal scraping
 - Giemsa stain
 - multinucleated giant cells
 - intranuclear inclusion bodies
 - viral culture
 - PCR

Assessment

HSV keratitis

Treatment

- Medical
 - topical antivirals
 - trifluridine eyedrop 1%
 - X 7-14 days
 - ganciclovir gel 0.15%
 - effective alternative to topical treatment
 - oral acyclovir
 - 400 mg, 5x/day
 - noncompliant patients/children
 - for photophobia
 - cycloplegia
 - skin lesions
 - antibiotic ointment
 - acyclovir ointment
 - cool compress
 - prophylactic therapy with antivirals
 - if multiple recurrences of epithelial disease or stromal disease
 - 400 mg, 2x/day
 - oral acyclovir (famciclovir, valacyclovir)
 - 3-4x/day
 - trifluridine eyedrop 1%
 - 3-5x/day
 - ganciclovir gel 0.15%
 - taper topical steroids rapidly
 - stromal keratitis
 - topical steroid + oral antiviral
- Surgical
 - debridement of infected corneal epithelium

Consultation/Referrals

internist if immunodeficiency suspected

Prognosis & Complications

- good prognosis
 - most cases of HSV epithelial keratitis resolve spontaneously
- recurrences are common
 - course
 - reexamine in 2-7 days

Patient Education

- Follow-up
 - if no improvement in 2 weeks, consider
 - non-compliance
 - topical drug toxicity
 - culture
 - non-nutrient agar with E-coli overlay
 - calcofluor white stain
 - acanthamoeba