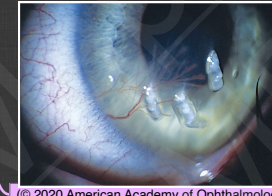


Filamentary Keratopathy

Case Description

70-year-old woman complains of burning, light sensitivity, and dry sensation of both eyes

Image Description



(© 2020 American Academy of Ophthalmology)

corneal filaments and corneal vascularization

Differential Diagnosis

of filamentary keratopathy

- dry eye syndrome (DES)
 - most common cause
- prolonged patching
- topical drug toxicity
- SLK
 - superior cornea
 - pannus
 - punctate epithelial erosions
 - filaments
- recurrent corneal erosion
- exposure keratopathy
- neutrophic keratopathy
- irregular corneal surface
 - surgical wound

Additional Testing

- stare test
 - after a few blinks, patient is asked to look at a visual acuity chart
 - normally the time until the image blurs should be > 8 seconds
- tear break-up time
 - appearance of dry spots in <10 seconds is considered abnormal
- basal tear secretion
 - topical anesthetic
 - inferior cul-de-sac is dried
 - Schirmer strip is bent at the notch and placed with the short end resting on the conjunctiva and the fold crease on the eyelid margin
 - at the lateral one-third of the lower eyelid
 - strip is left in place for 5 minutes
 - ≈10–15 mm normal

Schirmer I test

like basal tear secretion test, but no topical anesthetic is used

to evaluate both basic and reflex tearing

Schirmer I and Schirmer II tests

Schirmer II test

no anesthetic

cotton-tipped applicator is placed in the nostril and moved back and forth for 2 minutes

tear strip in place

to distinguish between fatigue block (when reflex secretion is suppressed because of chronic irritation) and a lack of function of the reflex secretors

Assessment

filamentary keratitis secondary to dry eye

Treatment

- Medical
 - preservative-free
 - 6-8x/day
 - artificial tear drops
 - qhs
 - artificial tear ointment
 - punctal plug
 - restasis
 - autologous serum
 - oral fish oil
 - moisture chamber goggles
 - therapeutic contact lens
 - monitor closely
 - + topical antibiotic
 - not for patients with severe dry eye
 - topical mucomyst (acetylcysteine) 10%
 - qid
- Surgical
 - jeweler forceps
 - cotton-tipped applicator
 - mechanical removal of filaments
 - tarsorrhaphy

Prognosis

good

Course

chronic disease

Complications

corneal infection

may need treatment for life

Data acquisition

History

- medical history
 - autoimmune disorders (DES)
 - diabetes
 - cigarette smoking
- ocular history
 - onset & course of symptoms
 - FB sensation
 - pain
 - red eye
 - tearing
 - photophobia
 - eye pain/FB sensation upon waking
 - dry eye
 - treatment for dry eye
 - dry mouth
 - eye patching
 - topical medication

Physical Exam

- blepharitis
- lagophthalmos
- conjunctival papillary (or follicular) hypertrophy
- tear film height
 - <0.3 mm is abnormal
- location of corneal filaments
 - superior (SLK)
 - inferior (exposure keratopathy)
- fluorescein staining
 - look for punctate/gross epithelial erosions
- corneal sensation
 - neutrophic keratopathy