Authors: Vanessa Hernandez, OD (1), Jared Hayashi, OD (2), Lily Zhu-Tam OD, FAAO (3)

(1) Bronx Lebanon Hospital Center, resident
(2) Bronx Lebanon Hospital Center, resident
(3) Bronx Lebanon Hospital Center, attending

Title: Unilateral central corneal neovascularization secondary to blepharokeratoconjunctivitis in a pediatric patient

Abstract: Blepharokeratoconjunctivitis may be underdiagnosed in the pediatric population, resulting in higher rates of complications in children. This is a case report of a 10 year old male with severe blepharokeratoconjunctivitis causing significant visual impairment.

Outline:

I. Case History:
   a. 10 year old male
   b. Unremarkable medical history
   c. No reported allergies
   d. Complains of chronic, recurrent redness, light sensitivity, and irritation OS>OD of a three year duration.
   e. Used artificial tears PRN as given by previous eye care providers with mild relief.

II. Pertinent findings:
   a. VA: 20/20- OD, 20/60 OS
   b. Pupils WNL, no APD
   c. Full EOMs
   d. Full CVF OD, OS
   e. Intraocular pressure WNL OD, OS
   f. Anterior segment:
      i. Significant crusting and flakes at the lid margin OS>OD
      ii. Inspissated meibomian glands OS>OD
      iii. Papillary reaction OS>OD
      iv. Conjunctival hyperemia OS>OD
      v. Unilateral peripheral corneal neovascularization 360 with extensive protrusion inferior nasally into the visual axis leading to a significant decrease in visual acuity OS
   g. Posterior segment
      i. Optic nerves pink, healthy, distinct OU
      ii. Macula flat OU
      iii. No retinal breaks/detachments OU

III. Differential diagnosis:
   a. Blepharokeratoconjunctivitis
   b. Marginal keratitis
   c. Phylectenular keratitis
d. Allergic keratoconjunctivitis

IV. Diagnosis and discussion:
a. The disease process of blepharokeratoconjunctivitis in children is poorly understood due to the lack of studies.
b. Blepharokeratoconjunctivitis is generally bilateral but can occur unilaterally and asymmetrically especially in the pediatric population (6).
c. Corneal involvement seems to occur more commonly in pediatric patients and occurs more centrally rather than peripherally compared with adults, leading to an increased risk of visual impairment (6).
d. Pediatric patients are frequently misdiagnosed for several years prior to receiving appropriate treatment (6).
e. Poorer prognosis associated with:
   i. Longer duration prior to treatment
   ii. Younger age of onset

V. Treatment, management:
a. Topical steroid suspension: Prednisolone Acetate 1%
b. Topical antibiotic ointment: Erythromycin
c. Lid hygiene/warm compresses
d. Resulted in some regression of corneal neovascularization and an improvement in symptoms.
e. Severe cases were found to be managed successfully on oral erythromycin (4).
f. Recurrences are common and were found to be treated successfully with low dose topical steroids (4).

VI. Conclusion:
a. Blepharokeratoconjunctivitis can cause the following:
   i. Central corneal scarring
   ii. Corneal perforation possible in suboptimally treated cases
   iii. Amblyopia in younger children
b. The key is early detection and aggressive treatment of blepharokeratoconjunctivitis in the pediatric population to minimize risk of severe long-term visual impairment.

References:


