Phlyctenule vs. Conjunctival Intra-epithelial Neoplasia (CIN): An Overlooked Battle

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Abstract

Corneal opacities are difficult to diagnose, and range from benign to life threatening. This poster discusses a phlyctenule case that appeared as a conjunctival intra-epithelial neoplasia (CIN) in a patient with history of malignancy.

I. Case History

- 76 year old white male
- Chief Complaint:
  - General eye exam
  - Denied symptoms of redness, burning, itching, pain and foreign body sensation
- Ocular History
  - Normal tension glaucoma suspect based on asymmetric cupping
  - Meibomian gland dysfunction (MGD) OU
- Medical History
  - Invasive squamous and basal cell carcinoma (SCC) several throughout body since 1996
  - Melanoma multiple skin lesions removed
  - Prostate cancer
  - Osteoarthritis
  - Hypertension
- Medications
  - Lisinopril 10mg
  - Ibuprofen 600mg
  - Calcium 500mg/Vitamin D 200mg
  - Ammonium Lactate 12%
II. Pertinent findings

- Clinical
  - Best corrected distance acuity: 20/20-2 OD, 20/20-2 OS
  - Anterior segment
    - Moderate blepharitis OU
    - Mild dry eyes OU
    - Corneal opacity OS inferior temporal
      - Whitish
      - Round 2mm in size
      - Adjacent to corneal limbus
      - Vascularization
  - Physical
    - Skin melanoma
  - Laboratory studies
    - None; a biopsy was chosen not to be performed in this case unless there is progression
  - Imaging
    - Anterior segment photos were taken to monitor for changes

III. Differential diagnosis

- Primary/leading
  - Phlyctenule
- Differentials
  - Corneal intraepithelial neoplasia (CIN)
  - SCC
  - Pannus
  - Pterygium

IV. Diagnosis and discussion

- Pterygia were low on the list of differentials as this opacity was not at the typical 3 or 9 o'clock position and it did not seem to originate at the conjunctiva
- Pannus was ruled out due to the more opaque appearance of the lesion as opposed to simply inflammatory vascularization
- This patient fit the demographic of a white older male, in which CIN is typically found especially with history of malignancy
- Since this patient had a positive history of skin melanoma and carcinoma, and the appearance of the conjunctival/corneal edge lesion with corkscrew vessels, a pre-malignant and malignant neoplasia needed to be ruled out including CIN and SCC
A phlyctenule was also a high differential due to the clinical presentation in addition to the blepharitis and meibomian gland dysfunction causing the inflammatory reaction in response to staphylococcus.

Patient was presented to the cornea specialist and he agreed with the most likely diagnosis of phlyctenule due to the fact the lesion did not completely have the fleshy appearance of CIN but needs to be followed closely for progression.

V. Treatment, management
- Based on corneal overall presentation, this patient was diagnosed with a phlyctenule.
- Patient was instructed to use warm compresses and perform lid hygiene twice per day, as phlyctenules are formed in response to staphylococcus or other bacteria from the meibomian glands.
- The patient is being followed closely for progression, if it occurs then a biopsy is warranted.
- Anterior segment photos are taken to monitor for changes.
- Although treatment of a phlyctenule may involve the use of corticosteroids, they were not deemed necessary in this case especially because this patient was asymptomatic.

VI. Conclusion
- Phlyctenules can be mistaken for several other corneal opacities.
- It is important to take the patient’s medical history into account.
- This patient is being followed more closely due to his history of skin melanoma and carcinoma, so malignant lesions have to always be ruled out.
- Differential diagnoses of phlyctenule-like lesions can range from benign, to being indicators of life-threatening conditions.
- As these lesions are often a few millimeters in size at their largest, photodocumentation is crucial in monitoring for changes.
- If changes do occur, such as an increase in size, pigmentation, or abnormal vascular, a biopsy is warranted to rule out malignancy.