



## Eye pathology: Cornea, Conjunctiva, and Eyelid

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### Case-Based Questions (please see page 3 for answers)

1.	What is the most important clinical significance of a descemetocele?
a.	This is diagnostic of keratoconus.
b.	The patient has a corneal ulcer.
c.	The cornea is in danger of perforation.
d.	The patient needs a penetrating keratoplasty.

2.	What is the most important entity on your differential for recurrent chalazion?
a.	Sebaceous carcinoma
b.	Fungal organisms
c.	Sarcoidosis
d.	Infectious keratitis

3.	What is your most important clinical concern for conjunctival CIN/OSSN/squamous cell carcinoma in young patient (under 40)?
a.	High level of sun exposure
b.	Possible HIV infection
c.	HPV related disease
d.	Vitamin A deficiency

**Scroll to Page 3 for answers**

## Correct Answers and Rationales

### Question 1 Correct Answer and Rationale: **C. The cornea is in danger of perforation.**

Rationale: The best answer is C, danger of perforation and resulting open globe. A corneal descemetocele is defined as an intact Descemet's membrane with an overlying absence of stroma, resulting in anterior corneal herniation. Descemet's membrane is the sole corneal layer maintaining the integrity of the eye. This is often the result of corneal ulceration, and there is imminent risk of corneal perforation. Clinical scenarios resulting in corneal ulceration include microbial keratitis (bacterial and herpetic), neurotrophic ulceration (cranial nerve injury), dry eye disorders, trauma, and immune-related disorders.

### Question 2 Correct Answer and Rationale: **A. Sebaceous carcinoma**

Rationale: The best answer is A, sebaceous carcinoma. A chalazion is composed of benign lipogranulomatous inflammation from inspissated lipid secretions of the Meibomian glands of the tarsal plate of the eyelid. With recurrent chalazion, careful histopathologic examination to exclude malignancy, such as sebaceous or Merkel cell carcinoma, is warranted. The most common malignancy associated with recurrent chalazion is sebaceous cell carcinoma.

Ref: Sahu, S.K., "Sebaceous gland carcinoma of the lid: Masquerading as recurring chalazion". Int J Appl Bas Med Res. 2021: 11(2), pp117-119.

### Question 3 Correct Answer and Rationale: **B. Possible HIV infection**

Rationale: The best answer is B, possible HIV infection. Conjunctival squamous cell carcinoma (CIN is also referred to as Ocular surface squamous neoplasia (OSSN). This disease typically affects middle aged males, and is slow growing, with complete surgical excision an effective treatment. In younger individuals, particularly in equatorial Africa, there is a risk of HIV infection, and these lesions behave in a much more aggressive manner. Risk factors for the development of CIN include ultraviolet A and B exposure, ionizing radiation, HPV infection (6,11,16,18), immune suppression (HIV, medication, organ transplant), chemicals, ocular injury, and vitamin A deficiency.

Ref: Sun, J. et al. "Conjunctival squamous carcinoma in an HIV + woman: Association with high risk human papillomavirus". Hum Path, 2017: 64-68.; Shields, C. et al. "Conjunctival Squamous Cell Carcinoma Arising in Immunosuppressed patients (Organ transplant, Human immunodeficiency virus)".2011: 118 (11) pp 2133-2137.