Conjunctival keratoacanthoma/keratoacanthoma like squamous cell carcinoma: Err on the side of caution

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Access this article online

Quick Response Code:

Website: www.ijo.in

DOI: 10.4103/ijo.IJO_314_19

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Received: 15-Feb-2019 Revision: 11-Apr-2019
Accepted: 26-Apr-2019 Published: 22-Nov-2019

Key words: Conjunctiva, histopathology, keratoacanthoma, squamous cell carcinoma

A 30-year-old immune-competent Asian woman, coolie by occupation, presented with painless conjunctival lesion with progressive enlargement since 1 month. Patient was a nonsmoker and had significant exposure to ultraviolet radiation because of her occupation. Examination revealed a yellowish white, well-defined conjunctival nodule in interpalpebral region, 2 mm away from nasal limbus with a central hyperkeratotic core, and limited mobility [Fig. 1a]. Tumor was excised by "no-touch technique" with margin clearance, cryotherapy, and surface reconstruction. Histopathological examination showed an epithelial lesion with central keratin-filled crater surrounded by buttress like thickened epithelium [Fig. 1b]. Higher magnification showed irregular epithelial proliferations [Figs. 2 and 3], displaying

Cite this article as: Kapoor A, Vijitha VS, Mittal P, Mittal R. Conjunctival keratoacanthoma/keratoacanthoma like squamous cell carcinoma: Err on the side of caution. Indian J Ophthalmol 2019;67:2044-5.

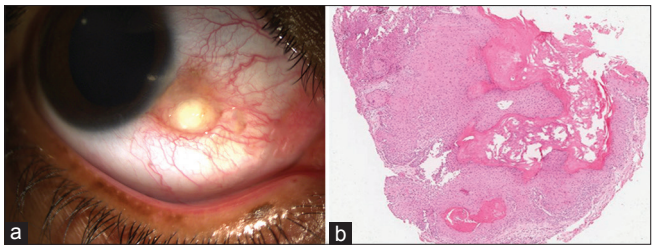

Figure 1: (a) Clinical image showing a conjunctival nodule with central hyperkeratotic core; (b) Photomicrograph showing a central keratin-filled crater surrounded by thickened epithelium (Hematoxylin and Eosin, 2X)

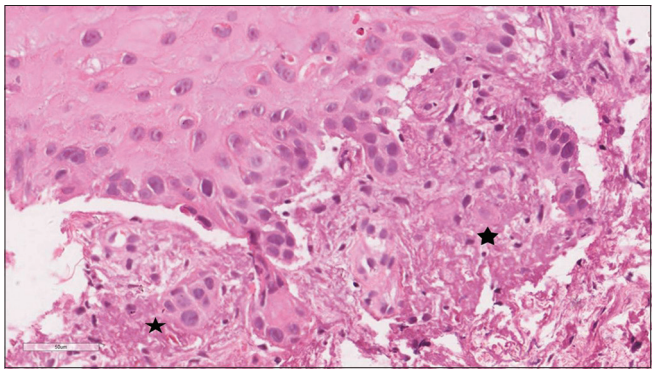

Figure 2: Stromal invasion by multiple, irregular, atypical epithelial proliferations of varying sizes (few loosely cohesive: asterisks marked- Figure 2; circles' marked- Figure 3) and stromal actinic change. Nuclear pleomorphism, atypia, and conspicuous nucleoli noted in epithelial component (Hematoxylin and Eosin, 40X). Foci of dyskeratosis (tadpole like cell, arrow marked, Figure 3) and atypical mitoses (arrow head, Figure 3) also noted

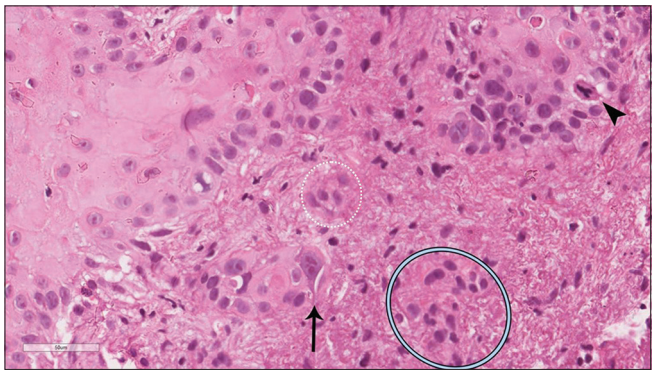

Figure 3: Stromal invasion by multiple, irregular, atypical epithelial proliferations of varying sizes (few loosely cohesive: asterisks marked- Figure 2; circles' marked- Figure 3) and stromal actinic change. Nuclear pleomorphism, atypia, and conspicuous nucleoli noted in epithelial component (Hematoxylin and Eosin, 40X). Foci of dyskeratosis (tadpole like cell, arrow marked, Figure 3) and atypical mitoses (arrow head, Figure 3) also noted

atypia and extending through the basement membrane into stroma, some of which were loosely cohesive, (asterisks marked- Fig. 2; circles marked- Fig. 3). Stroma showed actinic change. Dyskeratosis (Fig. 3 tadpole like cell-arrow marked) and atypical mitoses (Fig. 3, arrow head marked) were noted. Thus, the lesion was termed as keratoacanthoma-like squamous cell carcinoma. There has been no recurrence 24-months postsurgery.

Freeman first described "conjunctival keratoacanthoma" based on classical history, typical nodular appearance, central crater, rounded edges, and distinctive histopathology.[1] Keratoacanthoma is a biologically unstable tumor with potential for self-regression and can also show enigmatic progression to squamous cell carcinoma (SCC).[2] There is limited understanding of the natural course of mucosal keratoacanthoma, as they are frequently excised than observed.[3] Conjunctival keratoacanthomas are rare with sparse reports in Asians.[3,4] Similar to SCC, they have a limbal predilection - temporal more than nasal.[3-5]

On histopathology, central keratin-filled crater surrounded by overhanging epidermal edges is characteristic. The epithelium is acanthotic with eosinophilic glassy appearance of cytoplasm.[1] Histopathology may vary between early, well developed to regressing stages or a tumor undergoing SCC like change.[2,5] Despite the typical features in well-developed phase, definite differentiation from SCC may be challenging as KA in its early/proliferative phase may show horn pearls, cellular atypia, mitoses, and infiltrating borders, present in SCC.[1,3] In our case, the crateriform lesion also showed stromal invasion by irregular epithelial masses with loose cohesion, pleomorphism, atypia, and atypical mitoses, indicative of carcinoma. Complete surgical excision with margin clearance is recommended for suspected conjunctival keratoacanthoma and histopathological evaluation further aids prognostication. Long-term follow-up is recommended for early detection of recurrence. Patients should be educated to avoid long and persistent exposure to ultraviolet radiation and to self-examine the site of surgery and other UV exposed areas for recurrence or development of new lesion.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

References

1. Freeman RG, Cloud TM, Knox JM. Keratoacanthoma of the conjunctiva: A case report. Arch Ophthalmol 1961;65:817-9.
2. Takai T. Advances in histopathological diagnosis of keratoacanthoma. J Dermatol 2017;44:304-14.
3. Kifuku K, Yoshikawa H, Sonoda K, Kawano Y, Miyazaki K, Ishibashi T. Conjunctival Keratoacanthoma in an Asian. Arch Ophthalmol 2003;121:118-9.
4. Perdigão FB, Pierre-Filho Pde T, Natalino RJ, Caldato R, Torigoe M, Cintra ML. Conjunctival keratoacanthoma. Rev Hosp Clin Fac Med Sao Paulo 2004;59:135-7.
5. Sbazo BA, Şovrea AS, Bartos DM, Bartos A, Georgiu C. Keratoacanthoma of the conjunctiva-case report and review of the literature. Rom J Morphol Embryol 2017;58:1605-9.