

Intralesional and topical interferon therapy following incomplete primary excision of ocular surface squamous neoplasia

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Key words: Chemotherapy, conjunctival squamous cell carcinoma, excision biopsy, eye tumor, ocular surface squamous neoplasia

Ocular surface squamous neoplasia includes a wide spectrum of premalignant and malignant tumors affecting the elderly, those with immunocompromised status, excessive sun exposure, xeroderma pigmentosa, and cigarette smokers. Management includes excision biopsy, combined with topical chemotherapy, antiviral therapy, and immunomodulation.^[1-4]

A 62-year-old male presented with pain and redness in the left eye of 4 months duration. He reported excision biopsy of conjunctival tumor with amniotic membrane transplant (AMT) in that eye 3 months previously, elsewhere. Histopathological report revealed conjunctival squamous carcinoma *in situ* with incomplete excision at lateral margins and tumor-free deeper margins.

Discussion

At presentation to us, vision in both eyes was 20/20. The right eye was normal [Fig. 1a]. Left eye showed bulbar conjunctival congestion, absorbing AMT with anchor sutures, an exuberant conjunctival nodule (2 mm × 2 mm), and suspicious of residual conjunctival tumor [Fig. 1b and c]. There was no involvement of the cornea. The patient was treated with intralesional and subconjunctival injection of 10 million units of interferon (IFN) alpha-2b [Fig. 2] followed by topical IFN (1 million units/1 ml) 3 times a day for 6 months. The patient was reviewed at 4 weeks follow-up with a significant reduction of tumor [Fig. 1d], and continued to improve at each monthly visit [Fig. 1d-h]. Topical IFN treatment was stopped at 6 months follow-up. At the last follow-up 1 year from presentation, the left eye remained recurrence-free.

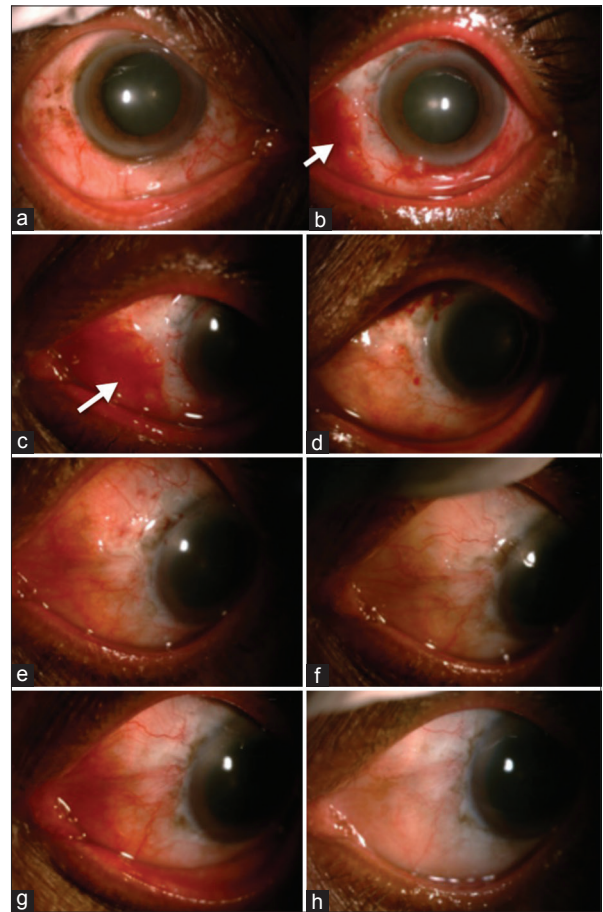


Figure 1: At presentation, the right eye was normal (a). The Left eye revealed residual ocular surface squamous neoplasia with exuberant conjunctival lesion (arrow) near the nasal limbus (b and c); 10 mIU/1 ml interferon was injected and topical interferon (1 mIU/ml) prescribed for 6 months. One month following injection (d), a significant reduction of the tumor was noted. Two months following injection (e), tumor was completely resolved. Regression was maintained at 4 months (f), 6 months (g), and 1 year following injection (h)

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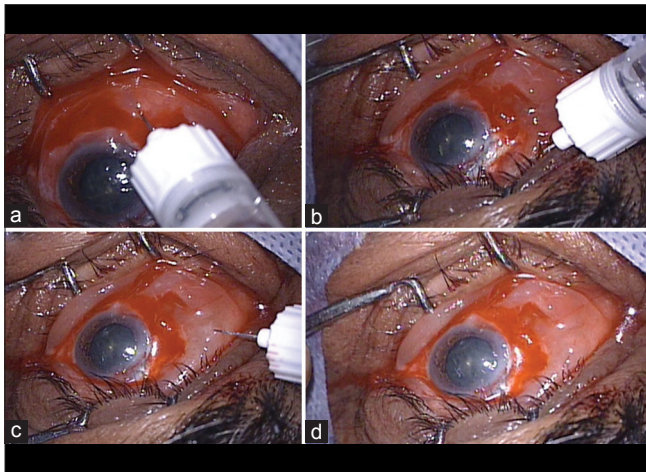


Figure 2: Technique of interferon injection. Residual ocular surface squamous neoplasia was treated with intralesional and subconjunctival injection of interferon in inferior fornix (a), superior fornix (b), and medial fornix (c) with conjunctival ballooning (d)

Conclusion

Subconjunctival and topical IFN alpha-2b are a useful therapeutic approach to treat incompletely excised conjunctival

intraepithelial neoplasia with complete tumor control and minor side effects.^[5]

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Conflicts of interest

There are no conflicts of interest.

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