

Case Report

# Unilateral ocular surface squamous neoplasia in a case of laryngeal carcinoma: A case report

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## ABSTRACT

We discuss a unique case, where a patient is suffering from both laryngeal carcinoma and ocular surface neoplasia with a strong family history of multiple malignancies of various organs. The patient is a 65-year-old male suffering from unilateral left-sided ocular surface neoplasia involving the inferotemporal quadrant of limbus and sclera. The lesion was excised surgically with double freeze-thaw cryotherapy and was started on topical mitomycin-c (0.02%) for 3 1-week cycles over 6 weeks.

**Keywords:** Ocular surface neoplasia, Laryngeal cancer, Carcinoma prostate, Pancreatic cancer, Acute leukaemia

## INTRODUCTION

Ocular surface squamous neoplasia is a term used to describe a premalignant or malignant lesion of the ocular surface, which, in other terms, may broadly comprise dysplasia or carcinomatous lesions.<sup>[1]</sup> The risk factors include advanced age (>60 years), male, smoker, exposure to UV light and human papillomavirus and exposure to carcinogens.<sup>[2]</sup> In this case report, we discuss a case suffering from both laryngeal carcinoma and ocular surface neoplasia, having a strong family history with environmental risk factors and treat the ocular pathology by a combination of surgery and topical agents.

## CASE REPORT

A 65-year-old male presented to us with a unilateral gradually progressive enlarging mass in his left eye for the past 2 months, the mass was causing him ocular irritation and foreign body sensation. The corrugated mass had an irregular surface, was gelatinous, solid in consistency, and not adherent to the sclera, measuring 2 mm × 2 mm in dimensions. It was located in the inferotemporal quadrant of the limbus, and feeder's vessels were visible on slit lamp examination. The left eye was grossly normal on examination. The patient was a heavy smoker and farmer by occupation who had significant UV exposure. The patient's best-corrected visual acuity was 20/20 in both eyes. Gonioscopy showed no abnormality

of the angles. Furthermore, no abnormality was detected in either the anterior segment or posterior segment was also normal on examination for both eyes. Further, history revealed that the patient was a known case of carcinoma larynx (squamous cell carcinoma on biopsy) and he had undergone two cycles of neoadjuvant chemotherapy and external beam radiotherapy.

The patient had a remarkable family history. His brother was a known case of carcinoma prostate and pancreatic cancer. Furthermore, his grandson was suffering from acute lymphocytic leukaemia.

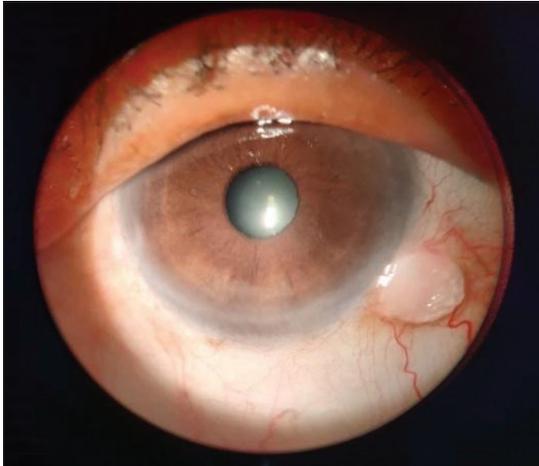
A B-scan ultrasound showed no extension of the mass into the eye or penetration of the ocular coats of the eye. On excision, biopsy stratified squamous epithelium with dense diffuse chronic inflammatory cell infiltration in the subepidermal zone and dysplastic foci were observed. Elisa for HIV was found to be negative.

The patient underwent wide excision of the mass (no-touch technique) with margins of 3 mm beyond clinical margins. This was followed by double freeze-thaw cryotherapy to the margins of the lesion. Following this, the sclera was left bare and the excised mass was sent for histopathological examination. In the postoperative period, mitomycin-c (0.02%) was topically instilled by the patient for 3 1-week cycles over 6 weeks.

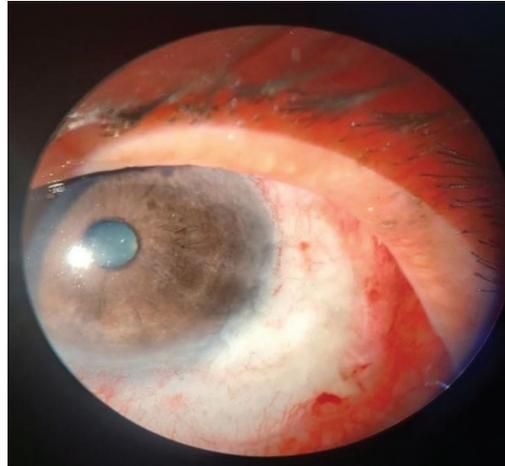
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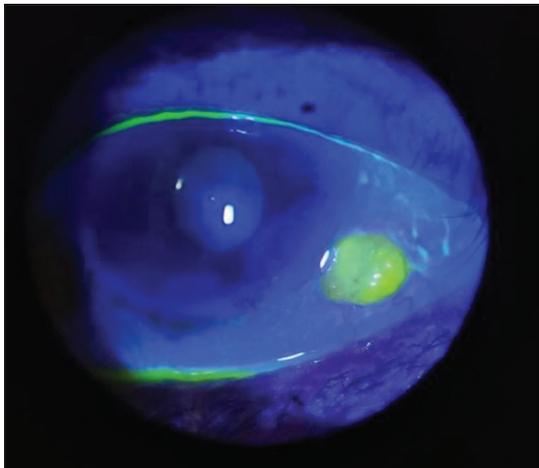
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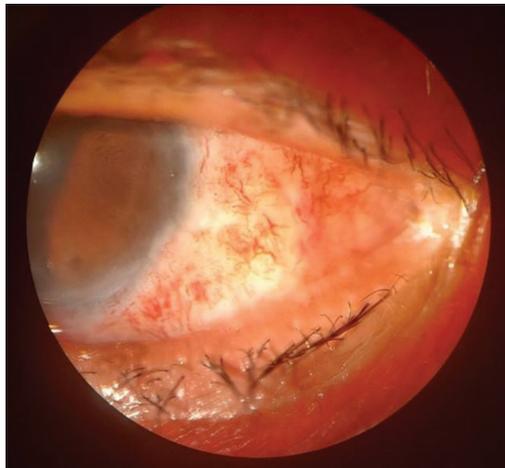
**Figure 1:** Pre-operative lesion.



**Figure 3:** Post-operative day 1.



**Figure 2:** Fluorescein stain of lesion.



**Figure 4:** Post-operative healing phase on week 8.

Since the excision the patient has been on regular follow-ups [shown through Figures 1-4]: 2 monthly for the first and second follow-ups and then 4 monthly follow-ups from the third follow-up. The patient has not shown any signs of recurrence as of now.

## DISCUSSION

In this case report, we see familial clustering of malignancies. Furthermore, the patient who presented to us suffered from ocular surface neoplasia and laryngeal carcinoma, yet another disease with a multietiological origin. Studies indicate genetic and environmental factors are also responsible for ocular surface neoplasia.<sup>[3]</sup> This is a unique case, where we observe malignancies such as laryngeal carcinoma,<sup>[4]</sup> prostate cancer<sup>[5]</sup> and acute lymphocytic leukaemia,<sup>[6]</sup> all of which have genetic factors clustered close together in the same family tree.

This case is unique in a way that the clustering of these malignancies in the family is associated with ocular surface

neoplasia and the same individual is suffering from ocular surface neoplasia and laryngeal carcinoma. Both have not been reported yet in the literature (as far as the knowledge of the authors goes).

## CONCLUSION

The case reports highlights the strong possible genetic association between ocular surface neoplasia and other systemic cancers and to establish more concrete evidence more research needs to be done.

## Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent.

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Nil.

### Conflicts of interest

There are no conflicts of interest.

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