

## CASE REPORT

# OCULAR SURFACE SQUAMOUS CELL NEOPLASIA IN A 25 YEARS MAN FROM D.I.KHAN, PAKISTAN

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## ABSTRACT

Ocular surface squamous neoplasia (OSSN) is a term that describes the spectrum of abnormal growth of atypical squamous epithelial cells of the conjunctiva, cornea, and sclera. It is more common in people working for long in sun-exposed areas. It resembles other common ocular surface conditions such as pterygium, pinguecula, atopic conjunctivitis, diffuse episcleritis, chronic blepharoconjunctivitis which may result in the wrong diagnosis of the entity. Here we report a case of OSSN in a 25 years old man which was referred to us as a case of pterygium. An excisional biopsy revealed clusters of dysplastic squamous epithelial cells.

**KEY WORDS:** Ocular Surface Squamous Neoplasia; Conjunctiva; Cornea; Sclera; Pinguecula; Diffuse Episcleritis; Biopsy; Mitomycin C; 5-Fluorouracil.

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## INTRODUCTION

Ocular surface squamous neoplasia (OSSN) is a term that is used to describe a wide spectrum that ranges from mild squamous dysplasia to conjunctival intraepithelial neoplasia (CIN) to large invasive squamous cell carcinoma (SCC) involving conjunctiva as well as cornea. It is one of the most common non-pigmented ocular surface tumors presenting in the elderly population and sometimes in young adults. In a study published in British Journal of Ophthalmology, the prevalence of OSSN was found to be highest in old age (median age 69 years) in the Australian population.<sup>1</sup> In a study performed in the United States, prevalence was highest among males (70 %).<sup>2</sup> We report a case of OSSN in a 25 years old man who was referred by a general physician as a case of pterygium.

## CASE REPORT

A 25 years old man, laborer by profession, presented in Department of Ophthalmology, DHQ Teaching Hospital, D.I.K, Pakistan, referred by the general physician as a case of pterygium in the right eye.

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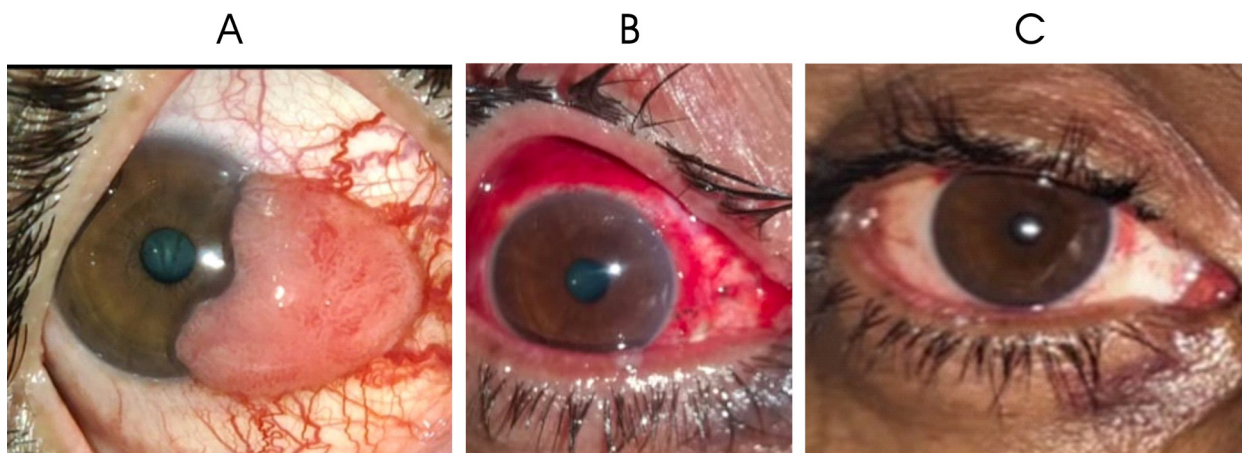
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The chief complaints of the patient were redness and watering for the last one year in the right eye. He had no history of ocular surgery or trauma. General and systemic examination was unremarkable. On the local clinical examination of the right eye, the patient had a red gelatinous strawberry-like mass of 15 mm x 10 mm x 5 mm on the nasal limbus between 2-6 o'clock, extending 2 mm on to the cornea. Engorged conjunctival sentinel vessels were seen encroaching beneath the base of the lesion. The surface of the lesion was irregular.

Serology to HIV was negative. Surgical excision biopsy with no-touch technique is the most popular modality of the treatment of OSSN. After taking the consent from the patient, a surgical excision biopsy of the mass followed by cautery of the feeder vessels was done and the specimen was sent to the laboratory for histopathological evaluation. He was given topical 0.04% Mitomycin C eye drops for two weeks postoperatively. At three months follow up, his condition was unvaried.

## DISCUSSION

Ocular surface squamous neoplasia (OSSN) was the term introduced by Lee and Hirst in 1997 to describe the range of the spectrum that encompasses mild squamous dysplasia to carcinoma in situ to invasive squamous cell carcinoma of conjunctiva as well as cornea. It is the most common nonmelanocytic tumor of the ocular surface, particularly common in the elderly population but can be seen in young adults as in our case. Associated risk factors include long time sun exposure, fair skin, cigarette smoking, pale iris, exposure to petroleum products, xeroderma



**Figure 1: Pre-operative (A), one day (B) and 15 days (C) postoperative picture of ocular surface squamous neoplasia (OSSN) in 25 years man from D.I.Khan, Pakistan.**

pigmentosum, human papillomavirus (HPV), and human immunodeficiency virus (HIV). The prevalence is more common in males except in Africa where the prevalence is equal in males and females or sometimes higher in females.<sup>3</sup> Diagnosis is mostly based on the clinical picture and histopathological evidence. Clinically it often masquerades as pterygium, chronic blepharoconjunctivitis, and atopic conjunctivitis.

Recurrence is as common as 50% within 10 years if tumor margins are involved and 30% within 10 years if tumor margins are not involved.<sup>4</sup> That is why it is important to regularly follow up the patient.

Treatment is predominantly surgical that involves complete excision biopsy followed by cautery or cryotherapy. Postoperatively topical chemotherapy such as Mitomycin C, 5-Fluorouracil, and interferon-alpha is used to reduce recurrence.

## CONCLUSION

A low threshold of suspicion for Ocular surface squamous neoplasia (OSSN) should be maintained in patients working in sun exposure areas presenting with unusual clinical manifestation of pterygium.

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## CONFLICT OF INTEREST

Authors declare no conflict of interest.

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## AUTHORS' CONTRIBUTION

The following authors have made substantial contributions to the manuscript as under:

Conception or Design: SA, FUA

Acquisition, Analysis or Interpretation of Data: SA, FUA

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All the authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.



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