



An Atypical Case of OSSN

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Abstract

The term Ocular Surface Squamous Neoplasia (OSSN) encompasses a rare spectrum of diseases of the conjunctiva or the cornea which ranges from squamous papilloma to mild dysplasia to carcinoma in situ to invasive squamous cell carcinoma. It is mainly a diagnosis of clinical suspicion. We here present a case of OSSN in a young female who presented to us with a six months history of mass in her left eye with irritation and redness and who was put on topical interferons based on clinical suspicion to which she showed little response. She was then taken up for excisional biopsy, the histopathology reports of which confirmed the diagnosis of OSSN.

Introduction

Ocular Surface Squamous Neoplasia, a rare spectrum of diseases, ranging from squamous papilloma to mild dysplasia to carcinoma in situ to invasive squamous cell carcinoma of the ocular surface. It is typically seen in elderly males who either live in equatorial regions or have fair skin or are immunocompromised or smokers or have chronic epitheliopathies. Here we present a case of OSSN in a young female with wheatish complexion, who is immunocompetent and a nonsmoker with no relevant ocular history. She was put on topical interferon 2 alpha after negative brush cytology based on clinical suspicion to which she showed little response. She was then planned for an excisional biopsy, the histopathology report of which confirmed the diagnosis of OSSN.

Case Report

A 35-year-old female presented to Eye OPD with the chief complaint of a painless mass in her left eye (as shown in Figure 1) which led to irritation and foreign body sensation in her eye for the last 6 months. She also complained that the mass had been gradually increasing in size.

She was a young female of average built living in the tribal area of Himachal Pradesh (Tropical Region). Her complexion was wheatish and she was a non-smoker. She had no relevant past ocular or systemic history.

On examination her visual acuity was 6/6 in both the eyes. On slit lamp examination there was a white leukoplakic conjunctival lesion about 4x4x3mm from o'clock to o'clock with a rough shiny surface. The margins were well defined, and it was abutting the left temporal limbus. The lesion was non-tender. Her pupillary reactions

were normal. her IOP was 14 and 15mmHg respectively in the right and left eye. Her rest of the ocular examination including ocular movements, color vision fundus examination and B scan ultrasonography were within normal limits. A clinical diagnosis of Ocular Surface Squamous Neoplasia was made.

Her complete hemogram was normal. The serology for Human immunodeficiency virus (HIV) and Human Papilloma Virus (HPV) was negative. She was taken up for brush cytology and histopathology of the lesion, but the report was unremarkable. She was started on topical interferon 2 alpha 1 drop four times a day based on clinical suspicion. This resulted in a decrease in the size of lesion though the lesion remained.

Six months later we planned an excision biopsy as the lesion still remained and the suspicion of neoplasia was still there. The no touch technique was used. The patient was given topical anesthesia. A wide surgical excision was done with 4mm of normal tissue marked all around with bipolar radiofrequency electrode. Conjunctival dissection was done with monopolar radiofrequency electrode. To attain hemostasis cauterization of the feeder vessels was done. The tumor was then taken, laid on a filter paper, its margins marked and preserved in 10% formalin to be sent for histopathological examination. The further steps were carried out with a fresh set of instruments to prevent any possibility of tumor seeding. Double freeze thaw was done to resected edges of conjunctiva from the underside. Ocular surface was reconstructed using amniotic membrane. The postoperative period was uneventful. The histopathology report showed papillomatous hyperplasia of the squamous mucosa, with increased keratinization, parakeratosis with mild to moderate dysplasia. Subepithelial stroma showed dilated congested blood vessels, with mild lymphocytic infiltrates in the subepithelial and myxoid change in the stroma which confirmed the diagnosis of Ocular Surface Squamous Neoplasia. Her post operative

appearance was as shown in Figure 2. The patient is on regular follow up and has no complaints.



Figure 1



Figure 1

Discussion

The term Ocular Surface Squamous Neoplasia is a broad term including a disorder of the cornea and varies from squamous papilloma to mild dysplasia to carcinoma in situ to invasive squamous cell carcinoma. These disorders though rare have a clinical significance since they can be easily mistaken for other common disorders like pterygium and be mistreated, since they also occur frequently at the limbus.

OSSN is reported to have an incidence of 0.13-1.9 per 100,000.^{1,2} It is seen more frequently in elderly men in the age group of 50-70^{1,2} who have a fair skin with pale irises and high propensity to

skin burn who have been chronic smokers,^{3,4} residing in equatorial regions, who have a chronic sun exposure (especially to ultraviolet B radiations),⁵ are either immunocompromised (especially associated with HIV or HPV infections)^{6,7} or have a history of chronic epitheliopathy.⁶The present was atypical because it occurred in a young female with a wheatish complexion residing in tropical region, a nonsmoker, an immunocompetent person with no chronic epitheliopathy.

It typically presents as a slow growing mass on the limbus often in the interpalpebral area.⁸In the present case the lesion was about 2mm away from the limbus though it was in the interpalpebral area. Clinically the patient may be asymptomatic or may complain of irritation or redness in the eye as was seen in our case too. The diagnosis is mainly clinical with careful slit lamp examination. Morphologically the lesions may be gelatinous (leukoplakic or papilliform), nodular or diffuse.⁹ In this case it was

The management of OSSN is either medical (with drugs like Mitomycin C or 5 Fluorouracil), or Immunotherapy (Interferon alpha 2b) or Photodynamic Therapy or Surgical removal with No touch Technique.⁹ In our case we first prescribed her interferon alpha 2b to which the patient showed little response. This could either be due to poor patient compliance. Then the tumor was excised with the no touch technique and the tissue sent for histopathological examination which confirmed our diagnosis.

In conclusion we can say that OSSN can have varied manifestations. It is the high degree of clinical suspicion which aids the diagnosis and the early treatment which prevents further complications.

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