ABSTRACT

BACKGROUND:

Ocular Surface Squamous Neoplasia (OSSN), is the most common primary ocular surface neoplasm and in the later decades of life, the third most common tumor of the ocular region after Melanoma and Lymphoma. OSSN ranges from mild epithelial dysplasia on one end of the spectrum to invasive squamous cell carcinoma on the other end. It is common in tropical regions and there is an increasing trend of OSSN in developing nations with high prevalence of HIV infection. Most of the cases are undetected as they are usually asymptomatic and slow growing.

AIMS AND OBJECTIVES:

To analyze the clinical and histopathological characteristics of Ocular Surface Squamous Neoplasia (OSSN) cases and to study the proliferation marker Ki-67 expression and evaluate its usefulness in various grades of OSSN.

MATERIALS AND METHODS:

This is a Retrospective & Prospective study done at the department of Pathology, Regional Institute of Ophthalmology & Government Ophthalmic hospital, Madras Medical College, Chennai for a period of 3 years from May 2014 to April 2017. 50 histologically confirmed cases of OSSN were taken for the study. The paraffin blocks were obtained, slides reviewed and Ki-67 immunostaining was performed to evaluate the proliferation activity.

RESULTS:

In this study, OSSN age ranges from 25 to 84 years, mean age being 53.6 years. The commonest presentation was growth, in the nasal region of conjunctiva. Gelatinous type of OSSN was the most common morphological type. Only 4% of the
cases had HIV infection. The majority of OSSN are treated by surgical excision (96%) with wide margin clearance and the rate of recurrence was 4%. Pre-invasive OSSN especially conjunctival intraepithelial neoplasia grade III (CIN III) was more common than invasive OSSN (Squamous cell carcinoma) in the study. Ki-67 proliferation index had shown a statistically significant association with the grade of OSSN, with high grade invasive OSSN showing higher Ki-67 proliferation index (mean 36.7%) and pre-invasive lesions show a lower Ki-67 index (mean 18.9).

**CONCLUSION:**

Histopathology is the gold standard in diagnosing the distinct types and grades of OSSN and also gives a good insight about the clinical outcome of the disease. Ki-67 proliferation index had shown a statistically significant association with the grade of OSSN. Larger sample size and follow up could throw more light on the progression of OSSN and added value of this marker in OSSN.

**KEY WORDS:**

Ocular surface squamous neoplasia (OSSN) ; Ki-67 ; proliferation index