

Preliminary Study on Association between Histopathological and Clinical Characteristics of Oral Leukoplakia

Y.A Jayasinghe^{1*}, R. Yaddehige², S.M Jayawickrama¹, K. Senevirathna¹,
B.S.M.S. Siriwardena³, R.D Jayasinghe²

¹*Center for Research in Oral Cancer*, ²*Department of Oral Medicine and Periodontology*, ³*Department of Oral Pathology, Faculty of Dental Sciences, University of Peradeniya, 20400, Sri Lanka*

*ya_jayasinghe@dental.pdn.ac.lk

The purpose of this study is to see possible associations between various clinical appearances of OLK with histopathological characteristics. Ethical clearance was obtained from the Ethics Review Committee, Faculty of Dental Sciences, University of Peradeniya. Clinical records of the patients were retrieved from the Oral Medicine clinic and demographic and clinical information were recorded. Haematoxylin and Eosin sectioned slides of each patient were selected from the archives of the Department of Oral Pathology and the histopathological features were reassessed by an experienced Oral Pathologist. Descriptive analysis and Chi square test were performed to the preliminary data via SPSS Statistical Package. A total of 69 participants were recruited in this preliminary study and among the 73% were males, 33.9% were above the age 60 years, with the mean age of 55.26 (range 31-86, SD = 12.623). Of the total cohort, 47.8% patients are presented with white lesions, as the main complaint. Majority of the lesions were in the buccal mucosa (23.9%) followed by tongue (20.9%) and commissures (12%) in addition 57.8% lesions appeared as homogenous. Based on histopathological findings, the majority depicted the epithelial thickness of 1.1mm (17.4%), where the mean was 1.148 (range 0.3-3.2, SD=0.5335) and 55.1% exceeds 1mm. Out of all cases, 89.9% cases had keratinization, where 46.4% were Keratinized and 43.5% were hyper-keratinized. Considering the buccal mucosa, 56.3% were Keratinized and 30% were hyper-keratinized. About 50.8% cases had dysplasia of which 66.7% were mild. 21.2% showed severe dysplasia giving a higher risk in progression to malignancy. Among all, 85.5% cases were presented with inflammation. Depending on the density of the sub mucosal inflammation, majority of the cases were light (51.7%). A significant association was observed in ortho-keratinization ($p=0.014$), stage of dysplasia ($p=0.07$), risk ($p=0.008$) between age and in males. Based on clinical features, burning sensation was significantly associated with age and in females ($p=0.023$). Preliminary findings of this study demonstrate a correlation between clinical presentation and histopathological features.

Keywords: Oral Leukoplakia, Histopathological features, Clinical