

CLINICAL CHARACTERISTICS OF ORAL WHITE LESIONS OF CONCEPTUAL PRECANCEROUS INTEREST

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Criteria and classification of diseases and its manifestations are important factors to consider when making research, may it be clinical, epidemiological or experimental. White or whitish changes comprise an array of lesions of quite different nature - from very innocent and harmless ones to lesions being of precancerous nature. During the last decades attempts have been made to differentiate between all these lesions and also to make subclassifications for the reason of, among else, risk evaluation - risk of a lesion to develop oral cancer.

White or whitish lesions may be divided into specific/specified entities and leukoplakias. As a matter of fact, leukoplakia may be defined as "a predominantly white lesion of the oral mucosa that cannot be characterized as any other definable lesion". This definition has been suggested after two international symposia in Sweden in 1983¹ and in 1994².

At the first meeting the importance of using strict criteria was illustrated by the fact that one and the same investigator could reach at prevalence figures of oral white lesions between 0.7% and 24.8% only depending on what criteria were used³.

From clinical and epidemiological studies it is well known that leukoplakias may carry various

risks which may be related to clinical appearance and location in the oral cavity. Subclassification may then be of considerable value. Thus, at the first meeting mentioned above, leukoplakia was divided into homogeneous and non-homogeneous lesions and also into tobacco-associated and idiopathic (cryptogenic) ones¹. At the second meeting only the first subdivision was suggested². Further, erythroplakia was added since leukoplakia and its subtypes could be looked upon as a "continuous" spectrum of red-white lesions which could not be diagnosed as any other definable lesion^{1, 2} and presumptively with increasing risk related to increased appearance of the red component.

For follow up of leukoplakias including learning their natural course and also to assess results of management it then seems logic to categorize leukoplakias. An attempt has been made to use a staging system for characterization of groups of leukoplakias including parameters such as Size (S), Clinical aspects (C) and, when applicable, Pathological features (P)². Later Location (L) has been suggested as an additional trait.

Subdivision of lesions may be of considerable importance for various analyses. Such subdivision has been useful for, e.g. snuff induced changes. Thus, a four-degree scale was introduced in 1976⁴ and it has then been applied in a series of studies attempting to relate the severity of the lesions to habit patterns and contents of the snuff quids⁵⁻⁸. Such a system may be adopted in different national studies even if the grading may be modified⁹.

The benefit of criteria and subclassification may also be illustrated by the condition of leukoedema. This harmless oral mucosal change

was defined and characterized in 1953¹⁰ and use of set criteria and subclasses was used to show the association with tobacco habits¹¹.

Lichen planus is a lesion with a considerable clinical complexity in skin as well as in the oral mucosa. Attempts have been made to establish clinical criteria and subclassifications¹²⁻¹⁴. As opposed to leukoplakia, for which lesion histological evaluation is used for the purpose of exclusion, lichen planus has some defined histopathological characteristics¹⁵ to be used for its proper identification. They may be used for diagnostic purposes in any single case but they may also be used to serve as an indirect indicator for validity of diagnosis in cases where no specimens have been obtained for microscopic analysis¹⁶.

The broad clinical spectrum of oral lichen planus may make it difficult to decide which changes should be included in this category of lesions, and which should not. For instance, certain patterns of tongue papillae atrophy are "typical" for patients with lichen planus. In one publication¹⁶ such atrophy has been included in the diagnosis of lichen planus only if white papules or striae have been present in other sites of the mouth. A "positive" biopsy should also identify the tongue lesion as being a lichen planus or lichenoid reaction. Otherwise this change has been referred to as lichenoid type of tongue papillae atrophy. If it had been included, the prevalence figure of lichen planus would have increased from 1.9% to 2.2%¹⁶.

Criteria and classification of oral lesions are imperative prerequisites for carrying out good quality clinical, epidemiological and experimental research and to make optimal use of data at analysis processes.

REFERENCES

1. Axell T, Holmstrup P, Kramer IRH, Pindborg JJ, Shear M et al. International seminar on oral leukoplakia and associated lesions related to tobacco habits. *Community Dent Oral Epidemiol* 1984; 12: 145-154.
2. Axell T, Pindborg JJ, Smith CJ, Van Der Waal I et al. Oral white lesions with special reference to precancerous and tobacco-related lesions. Conclusions of an international symposium held in Uppsala, Sweden, May 18-21 1994. *J Oral Pathol Med* 1996; 25, 49-54.
3. Axell T. Occurrence of leukoplakia and some other oral white lesions among 20,333 adult Swedish people. *Community Dent Oral Epidemiol* 1987; 15, 46-51.
4. Axell T, Mornstad H, Sundstrom B. The relation of the clinical picture to the histopathology of snuff dipper's lesions in a Swedish population. *J Oral Pathol* 1976; 5, 229-236.
5. Andersson, G, Axell T, Larsson A. Clinical classification of Swedish snuff dipper's lesions supported by histology. *J Oral Pathol Med* 1991; 20, 253-257.
6. Larsson A, Axell T, Andersson G. Reversibility of snuff dipper's lesion in Swedish moist snuff users, a clinical and histologic follow-up study. *J Oral Pathol Med* 1991; 20,258-264.
7. Andersson G, Bjornberg G, Curvall M. Oral mucosal changes and nicotine disposition in users of Swedish smokeless tobacco products, a comparative study. *J Oral Pathol Med* 1994; 23, 161-167.
8. Andersson G, Axell T, Curvall M. Reduction in nicotine intake and oral mucosal changes among users of Swedish oral moist snuff after switching to a low-nicotine product. *J Oral Pathol Med* 1995; 24. 244-250.
9. Ernster VL, Grady DG, Greene JC, Walsh M, Robertson P, Daniels TE et al. Smokeless tobacco use and the effects among baseball players. *J Am Dent Assoc* 1990; 264.218-224.
10. Sandstead HR, Lowe JW. Leukoedema and keratosis in relation to leukoplakia of the

- buccal mucosa in man. J Natl Cancer Inst 1953; 14. 423-437.
11. Axell T, Henricsson V. Leukoedema - an epidemiologic study with special reference to the influence of tobacco habits. Community Dent Oral Epidemiol 1981; 9. 142-146.
 12. Kuffer R. Le lichen plan de la muquese buccale Inf Dent 1971; 53, 2777-2785.
 13. Andreasen JO. Oral lichen planus I. Clinical evaluation of 115 cases. Oral Surg 1968; 25.31-42.
 14. Axell T, Rundquist L. Oral lichen planus - a demographic study. Community Dent Oral Epidemiol 1987; 15. 52-56.
 15. Kramer IRH, Lucas RB, El-Labban N, Lister L. A computer-aided study on the tissue changes in oral keratoses and lichen planus, and an analysis of case groupings by subjective and objective criteria. Br J Cancer 1970; 24. 407-426.
 16. Axell T. A prevalence study of oral mucosal lesions in an adult Swedish population. Thesis. Odontol Revy 1976; 27 suppl 36.

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