

## CLINICAL FORMS OF LEUKOPLAKIA

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**Abstract:** This article presents the oral leukoplakia and reveals different clinical aspects: Proliferative verrucous leukoplakia, hairy leukoplakia, tobacco leukoplakia. Early diagnosis of any lesion that may have malignant evolution: leukoplakia, erythroplakia, spot leukoplakia and lichen planus, is very important and may reduce the fervency of oral cancer.

**Keywords:** leukoplakia, clinical aspects

**Rezumat:** Articolul prezintă leucoplazia orală și evidențiază leziunile din cadrul diferitelor forme clinice: leucoplazia verucoasă proliferativă, leucoplazia păroasă a limbii, leucoplazia tabacică. Depistarea precoce de către clinicieni, a oricăror aspecte clinice lezionale orale, care au potențial malign: leucoplazia, eritroplazia, leucoplakia pătată și lichenul plan, are o importanță majoră, și poate duce la scăderea incidenței carcinoamelor orale.

**Cuvinte cheie:** leucoplazie, forme clinice

### INTRODUCTION

Leukoplakia is a white lesion which cannot be removed by ...differentiating from the mucosal candidiasis which can be easily removed from the mucosa or from the oral lichen planus or erythroplakia. Oral leukoplakia is associated with an easy local mucosal lesion which induces hyperkeratosis at the superficial level of the oral mucosa.

The local irritating factors which induce the oral leukoplakia are hard food mastication with edental crests, improper fixed or mobile prothetic works, excessive consumption of alcohol or excessive smoking. The genetic predisposition of this affection may be determined by the identification of certain tumoral genes p.35, proteic products, epithelial factors of cellular increase and certain tumoral cells [6].

Any oral lesion of the evolutive leukoplakia which cannot be stopped by removing the above-mentioned factors or whose causes cannot be identified, requires the compulsory examination by biopsy, as it presents an increased risk for the development of the malign formations [2].

As a result of a research made by Shafer and Waldron including 3360 of patients diagnosed with oral leukoplakia, 19,8% (670 of patients) presented either

mucosal dysplasia (pre-malign) either squamous cells carcinoma [7]

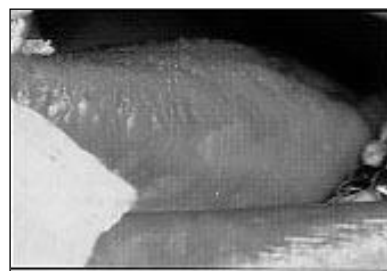
### CLINIC ASPECTS

Although leukoplakia defines affections which are unspecific from the clinical point of view, there are cases in which the exact diagnosis can be established, such as: hairy leukoplakia, the proliferative verrucous leukoplakia, tobacco leukoplakia.

**Hairy leukoplakia** of the tongue is an affection induced by the infection with Epstein-Barr virus, being encountered in the patients with weak immune system in the HIV disease [4].

The lesional clinical aspects may be: thin or homogenous as in figure no.1 and which are not serious, as against those with irregular aspect, which are harsh, large and with fissures as in figure no.2. In any of the cases, the correlation with the general health state of the organism will be made with the predisposing factors and with the patients' age in order to make the paraclinical investigations.

**Fig. 1:** Thin hairy leukoplakia of the lateral edge of the tongue to a patient of 42 years old.



**Fig.2:** Leukoplakia at the level of the tongue where a moderate epithelial dysplasia can be observed.



## CLINICAL ASPECTS

**Proliferative verrucous leukoplakia** was described for the first time by Hansen in 1985 [5]. The biopsy is not enough for the identification of this affection. The patients having this form of leukoplakia are the elderly who do not present carcinoma specific risk factors. The gum is most frequently affected, followed by the mobile mucosa and the tongue (fig.3). The lesions grew larger in time and have irregular, verrucous aspect and new lesions may occur [3]. The repeated biopsies begin to emphasize the presence of the dysplastic cells which establish the lesional diagnosis. Most of the cases, the evolution tends to squamous carcinoma or verrucous carcinoma (fig.4).

**Fig. 3: Severe leukoplakia of the maxillary gum mucosa. The risk factors or the irritating factors were not identified.**



**Fig. 4: At the level of the mandibular vestibular mucosa, the proliferative verrucous leukoplakia may be observed. The process evolved towards the verrucous carcinoma.**



**The tobacco leukoplakia** may occur as a result of the chronic tobacco consumption (including its mastication or snuff taking). These types of leukoplakia with thin aspect occur in the neighbourhood of the tobacco mucosal emplacement: jugal mucosa, vestibular pouch, fix gum. In some patients, leukoplakia may occur a few months or years after the direct action of these factors. The mucosal area is frequently harsh, white and with fissures. It is extended and the particles of the toxic substance containing nicotine are absorbed (fig.5).

**Fig. 5: Tobacco leukoplakia, the tongue surface is harsh and presents fissures.**



The patients who are chewing tobacco only on one side present an increased risk for developing leukoplakia on that particular side, as against those who are chewing tobacco on both sides. The risk increases along with the quantity of the daily consumed tobacco.

The lesions regress or disappear after the removal of the favouring agent, but the patients hardly renounce this vicious habit, as snuff taking contains as much nicotine as smoking 3 normal cigarettes.

The risk of lesions transformation into carcinoma or pre-malign lesion remains unknown, although it is proved that an oral carcinoma occurs 4 times more frequently to nicotine consumers than to those who do not smoke.

In some of the cases, the biopsy emphasized dysplasia but it was for surely associated with the squamous carcinoma or with the verrucous leukoplakia due to the excessive chronic alcohol consumption (fig.6).

**Fig. 6: Squamous carcinoma of the alveolar and maxillary vestibular mucosa regarding the tobacco emplacement during a number of years.**



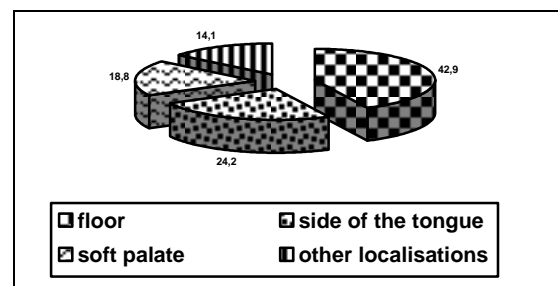
## DISCUSSIONS

All types of the oral squamous carcinoma evolved from a pre-malign lesion; this does not imply the reverse - that is not all oral pre-malign lesions evolve towards carcinoma.

The clinical study of leukoplakia and of the malign transformations of these ones emphasize the fact that a percentage of 3.6% up to 19,8% of the diagnosed patients registered a malign transformation of leukoplakia [1].

The frequent oral localisation of these lesions: oral (42,9%), lateral side of the tongue (24,2%), soft palate (18,8%) as in graphic 1:

**Graphic 1: Oral leukoplakia localisation.**



### CONCLUSIONS

- Leukoplakia of the oral mucosa is not easily to be diagnosed from the clinical point of view.
- The majority of the patients present a benign keratinize but in the clinical stage of the examination, the malignization potential could not be established.
- The negative prognostic factors are: patients' age, associated risk factors, oral local irritating agents and the evolution of lesions after the removal of the determinant factors.
- Sure diagnosis is established as a result of the biopsy, which establishes the stages of the lesion and helps to identify the pre-malign stage.
- By diagnosing the oral leukoplakia and by the detailed analysis of this, the stage of the affection can be established clinically and measures can be taken in order to prevent the unfavourable evolution towards different forms of carcinoma.

### BIBLIOGRAPHY

1. Bouquot JE, The pathology and progression of oral pre-malignancy. Epithelial dysplasia symposium. 5th International Congress on Oral Cancer London, Great Britain 1997, p 1.
2. Bouquot JE, Whitaker SB, Oral leukoplakia-Rationale for diagnosis and prognosis of its clinical sub-types or "phases." *Quintessence Int* 25:133-40, 1994.
3. Damm D, Curran A, White D, Leukoplakia of the maxillary vestibule *Oral Surg Oral Med Oral Pathol Oral Radiol Endod* 87:61-6, 1999.
4. Greenspan D, Greenspan JS, Significance of oral hairy leukoplakia. *Oral Surg Oral Med Oral Pathol* 73:151-4, 1992.
5. Hansen LS, Olson JA, Silverman S Jr, Proliferative verrucous leukoplakia -- A long-term study of thirty patients. *Oral Surg Oral Med Oral Pathol* 60:285-98, 1985.
6. Mashberg A, Morrissey JB, Garfinkel L, A study of the appearance of early asymptomatic oral squamous carcinoma. *Cancer* 32:1436-45, 1973.
7. Waldron CA, Shafer WG. Leukoplakia of the oral cavity. *Cancer* 36:1021-8, 1995.