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Oral White Lesions

Why we see these lesions clinically as a white

- lesions of the oral mucosa which are white results from a:-
  - thickened layer of keratin
  - epithelial hyperplasia
  - intracellular epithelial edema
  - reduced vascularity of subjacent connective tissue

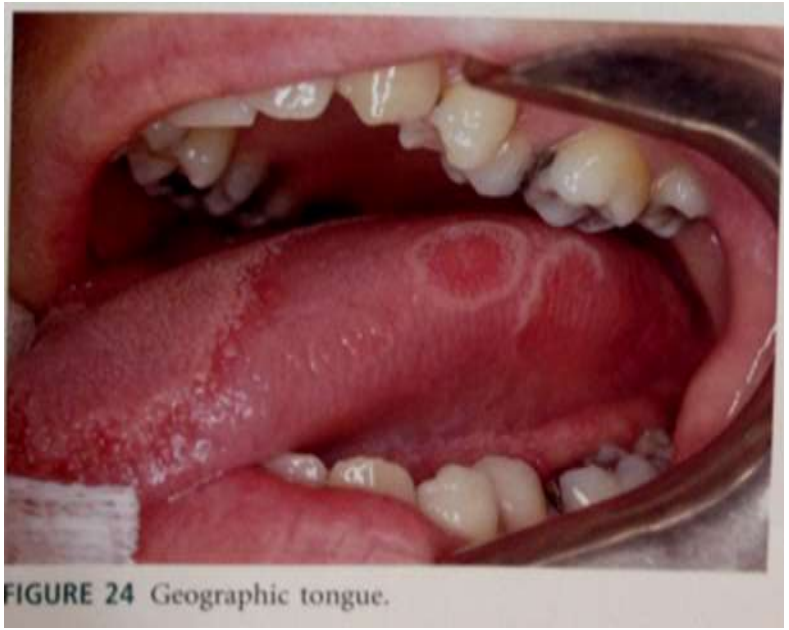

FIGURE 24 Geographic tongue.

White Lesions

- white or yellow lesions may also be due to fibrous exudate covering an:
  - ulcer
  - submucosal deposit
  - surface debris
  - fungal colonies

Classification of oral white lesions

- Hereditary
- Reactive
- Preneoplastic
- Other white lesions
- Non-epithelial (white- yellow lesions)

Hereditary

❑ Leukoedema

- ➢ generalized opacification of buccal mucosa that is regarded as a variation of normal.
- ➢ can be identified in majority of population

❑ Etiology & Pathogenesis

to date, cause has not been established

- ✓ smoking
- ✓ chewing tobacco
- ✓ alcoholo ingestion
- ✓ bacterial infection
- ✓ salivary condition
- ✓ electrochemical interactions have been implicated

FIGURE 3-1 Leukoedema.

Leukoedema

Clinical Features

- usual discovered as incidental finding.
- asymptomatic.
- symmetrically distributed in buccal mucosa.
- appear as gray-white, diffuse, filmy or milky surface.
- more exaggerated cases , whitish cast with surface textural changes:
  - wrinkling
  - or corrugations
- with stretching of buccal mucosa, opaque changes dissipate.
- more apparent in non-whites , especially African-American.

FIGURE 3-1 Leukoedema.

Leukoedema

Treatment

- NO treatment is necessary
- since there is no malignant potential.
- if there is any doubt about diagnosis, a biopsy can be performed.

Hereditary

❑White Sponge Nevus

- autosomal-dominant condition.
- due to point mutations for genes coding for keratin 4 and/or 13.
- affects oral mucosa bilaterally.
- NO treatment is required

White Sponge Nevus

Clinical Features

- asymptomatic folded white lesions may affect several mucosal sites.
- lesions tend to be thickened + spongy consistency.
- presentation intraorally is almost always bilateral + symmetric.
- usually appears early in life, typically before puberty.
- usually observed in buccal mucosa tongue + vestibular mucosa may be involved

Reactive

❑ Nicotine Stomatitis

- ➢ common tobacco-related form of keratosis.
- ➢ typically associated with pipe + cigar smoking.
- ➢ with positive correlation between intensity of smoking + severity of condition.
- ➢ combination of tobacco carcinogens + heat is markedly intensified in reverse smoking

  (lit end positioned inside the mouth).
- ➢ adding a significant risk for malignant conversion.

Nicotine Stomatitis

Clinical Features

- palatal mucosa initially responds with an erythematous change followed by keratinization
- subsequent to opacification or keratinization of palate.
- red dots surrounded by white keratotic rings appear

- dot represent inflammation of salivary gland excretory duct

Fig. 10-87 Nicotine stomatitis. Close-up of the inflamed ductal openings of involved salivary glands of the hard palate. Note the white keratotic ring at the lip of many of the inflamed ducts.

Nicotine Stomatitis

Treatment

- condition rarely evolves into malignancy.
- except in individuals who reverse smoke.
- discontinuation of tobacco habit

Fig. 10-87 Nicotine stomatitis. Close-up of the inflamed ductal openings of involved salivary glands of the hard palate. Note the white keratotic ring at the lip of many of the inflamed ducts.

Reactive

❑ Hairy Tongue

- clinical term referring to a condition of filiform papillae overgrowth on dorsal surface of tongue.
- There are numerous initiating or predisposing factors for hairy tongue:-

❖ broad spectrum antibiotics such as penicillin + systemic corticosteroids are often identified in clinical history of patients with this condition.

❖ oxygenating mouthrinses containing:

✓ hydrogen peroxide
✓ sodium perborate
✓ carbamide peroxide

have been cited as possible etiologic agents.

Hairy Tongue

Clinical Features

- Clinical alteration translates to hyperplasia of filiform papillae; result is thick or matted surface serves to trap bacteria, fungi, foreign materials.
- Extensive elongation of papillae occurs, gagging or tickling sensation felt may be.
- color may range from white to tan to deep brown depending on:
- diet
- oral hygiene
- composition of bacteria inhabiting papillary surface.

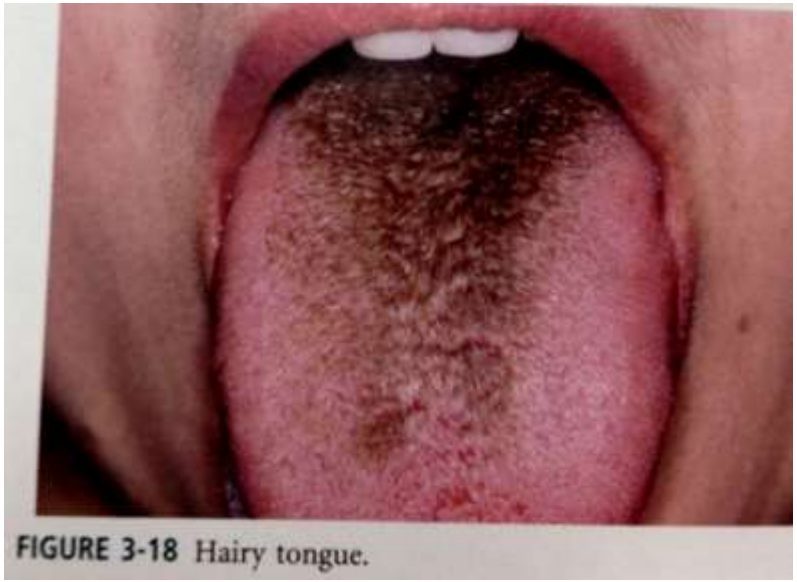

FIGURE 3-18 Hairy tongue.

Hairy Tongue

❑ Treatment

- ❖ Brush/scrape tongue with baking soda
- ❖ maintain good oral hygiene
- ❖ emphasize to patients that this process is entirely benign
- ❖ Self-limiting
- ❖ Tongue should return to normal after institution of physical debridement + proper oral hygiene.

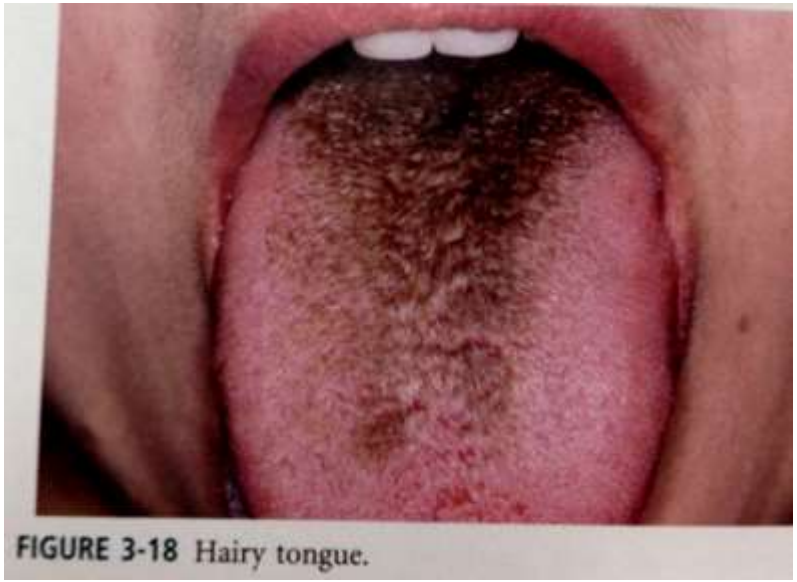

FIGURE 3-18 Hairy tongue.

Preneoplastic

❑Leukoplakia

- also known as Leukokeratosis; Erythroplakia
  - ✓ Leuko= white
  - ✓ Plakia = patch

- defined by World Health Organization (WHO) as a white patch or plaque that cannot be characterized clinically or pathologically as any other disease

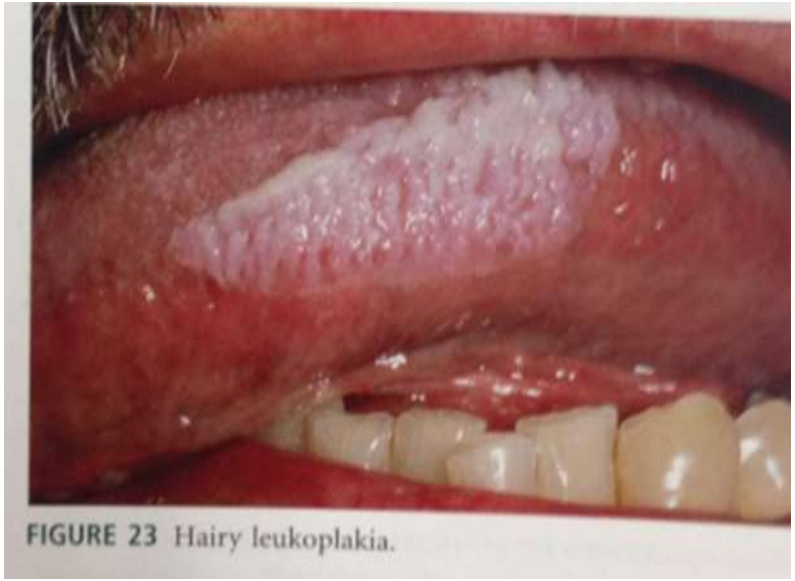

FIGURE 23 Hairy leukoplakia.

Leukoplakia

- clinical term indicating a white patch or plaque of oral mucosa
- cannot be rubbed off
- cannot be characterized clinically as any other disease
- biopsy is mandatory to establish a definitive diagnosis

FIGURE 22 Idiopathic leukoplakia.

Leukoplakia

Clinical Variants

- Mild or Thin Leukoplakia
- Homogenous or Thick Leukoplakia
- Granular or Nodular Leukoplakia
- Verrucous or Verruciform Leukoplakia
- Proliferative Verrucous Leukoplakia (PVL)
- Erythroleukoplakia or Speckled Leukoplakia

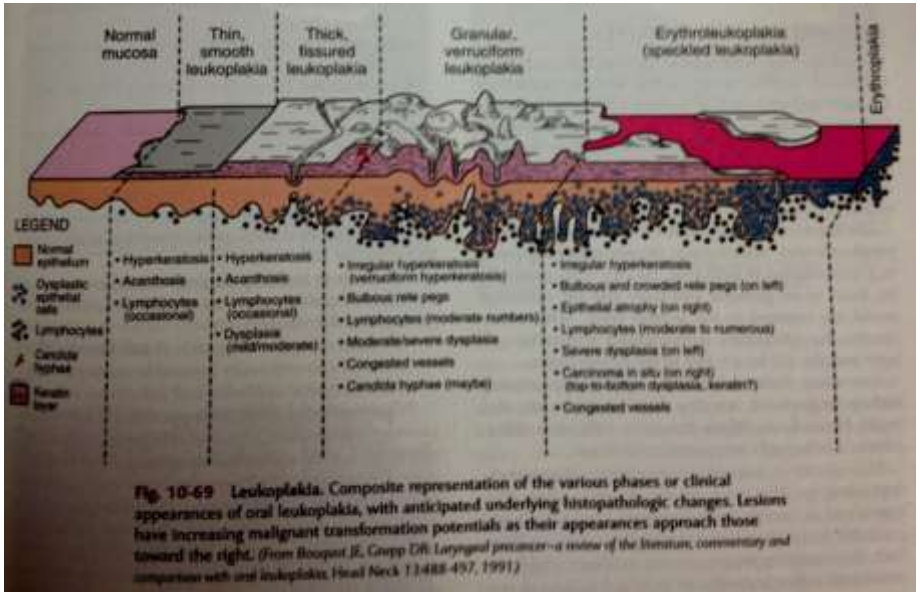

Fig. 10-69 Leukoplakia. Composite representation of the various phases or clinical appearances of oral leukoplakia, with anticipated underlying histopathologic changes. Lesions have increasing malignant transformation potentials as their appearances approach those toward the right. *(From Boopat JE, Gnepp DR: Laryngeal precancer—a review of the literature, commentary and comparison with oral leukoplakia, Head Neck 13:488-497, 1991.)*

Leukoplakia

❑Erythroplakia

- leukoplakia may become dysplastic even invasive, with no change in its clinical appearance.
- however, some lesions eventually demonstrate scattered patches of redness called erythroplakia.
- Erythro leukoplakia or Speckled Leukoplakia such areas usually represent sites in which epithelial cells are so immature or atrophic that they can no longer produce keratin.

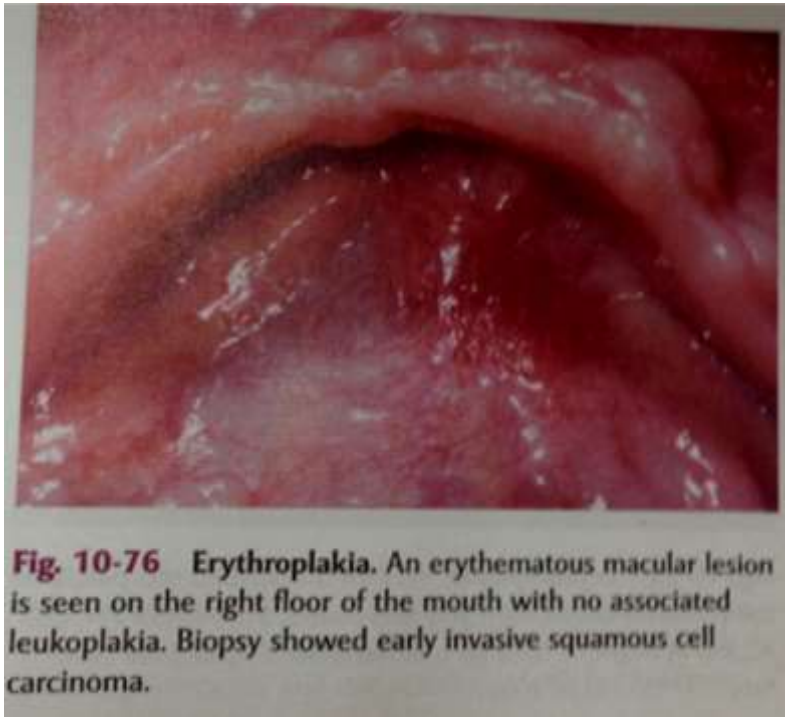

Fig. 10-76 Erythroplakia. An erythematous macular lesion is seen on the right floor of the mouth with no associated leukoplakia. Biopsy showed early invasive squamous cell carcinoma.

Leukoplakia

❑ Etiology & Prognosis

- many cases are etiologically related to use of tobacco in smoked or smokeless forms and may regress after discontinuation of tobacco use.
- other factors, such as alcohol abuse, trauma, and C. albicans infection may have a role in etiology.
- nutritional factors have been cited as important, especially iron deficiency anemia.

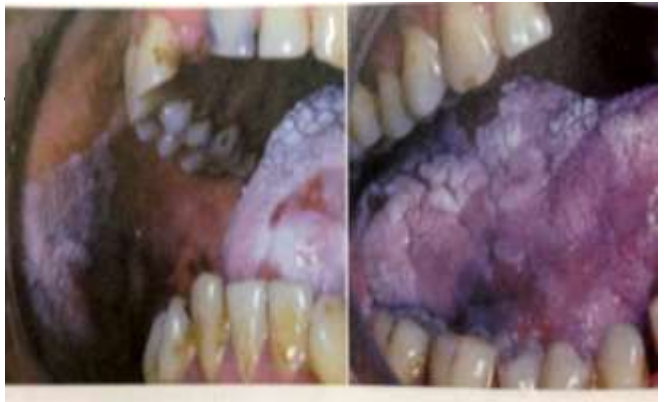

Fig. 10-66 Proliferative verrucous leukoplakia (PVL). A, Large, diffuse, and corrugated white lesions of the buccal mucosa and tongue. B, Same patient showing the extensive thickened and fissured alteration of the tongue.

Leukoplakia

❑Treatment & Prognosis

- absence of dysplastic or atypical epithelial changes periodic examinations + rebiopsy of new suspicious areas are recommended.
- if diagnosis as moderate to severe dysplasia excisio obligatory.
- for large lesions, grafting procedures may be necessary after surgery
- may recur after complete removal

Fig. 10-65 **Verruciform leukoplakia.** Exophytic papillary lesion of the anterior maxillary alveolar ridge. Biopsy revealed a well-differentiated squamous cell carcinoma.

Thank you