

Oral Mucosa: Variations From Normalcy, Part I

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Many lesions can be identified in the oral mucosa. Some are indicative of pathologic conditions restricted to the oral cavity, whereas others are signs of systemic disorders. A third group of alterations is not severe enough to be considered pathologic; however, knowledge of this group is mandatory for a correct differential diagnosis to be established. This is the first article in a 2-part series concerning all of these pseudopathologic conditions.

Oral mucous membrane, as the inner cover of the oral cavity, has a complex structure adapted to both its anatomical location and the functions it must perform. The oral cavity in the strict sense is localized internally to the alveolar processes. Its upper boundaries are the palate (hard and soft); its inferior boundaries are the floor of the mouth and base of the tongue. The palatoglossal arch and palatine tonsils define the posterior limit of the oral cavity.¹ Independent of the limits of the mouth, the oral mucous membrane continues anteriorly with the skin through a transitional area and posteriorly with the mucosa of the pharynx.

Oral epithelium originates partially from the endoderm (tongue), whereas the rest of the intraoral epithelial structures (ie, lips, buccal sulci, gingivae, cheeks, palate, floor of the mouth) have an ectodermal origin. Despite its different embryonic origin, the oral cavity is a physiopathologic unit.^{1,2}

The oral mucous membrane has some particular characteristics that differentiate it from the cutaneous cover. The mucous surface is dampened by saliva and has a pink coloration with different shades depending on the topographic location and epithelial width, as well as the maturing pattern of



Figure 1. Linea alba on buccal mucosa of the left cheek.

the epithelium. Other factors that influence oral mucosa coloration are the presence and degree of dilatation of the subepithelial corium vascular vessels and the amount of melanic pigment in the epithelium. Another difference between the skin and oral mucosa is the lack of cutaneous annexes, such as sweat glands and hair follicles. The glandular epithelium in the oral mucosa is organized to form minor salivary glands and sebaceous glands that are the only cutaneous remains occasionally found in the oral mucosa. Depending on its function, the oral mucosa is organized as masticatory mucosa (hard palate and attached gingiva), lining mucosa (ventral

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Figure 2. Clinical appearance of leukoedema.



Figure 3. Fordyce spots.

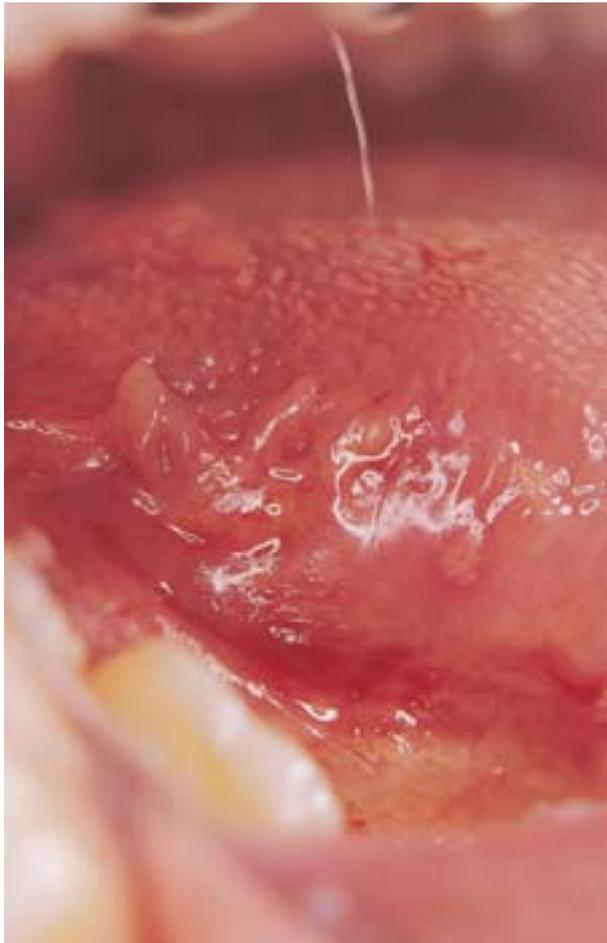


Figure 4. Foliate papillae (symmetrical ectopic lingual tonsil).

surface of the tongue, soft palate, floor of the mouth, buccal sulci, and lip and cheek mucosa), and specialized mucosa (dorsum of the tongue).

Pseudopathology of the Oral Mucosa

Some clinical conditions in the oral mucosa cannot be considered pathologic, though they are variations from normal or minor developmental disorders. We use Cawson's concept² of pseudopathology to group oral mucosal lesions not severe enough to be considered pathologic. Knowledge of these entities is mandatory to establish a correct differential diagnosis among pathologic conditions of the oral mucosa.

White Line (Linea Alba)—This slightly raised, bilateral whitish line goes from the corner of the mouth to as far back as the last molars, level with the occlusal surfaces of the teeth (Figure 1). This clinical image is due to a line of parakeratosis going through an epithelium with a maturing pattern of nonkeratinization, as on the cheek. The existence of an intraoral negative pressure that eases the



Figure 5. Sublingual varicosities, or “caviar tongue.”



Figure 6. Ectopic lymphoid tissue.

entry of cheek mucosa between the masticatory surfaces of the teeth has been proposed as the pathogenic mechanism of this lesion. No treatment is needed.

Leukoedema—This chronic process creates fine wrinkles on the oral mucosa in addition to turning it grayish, as though a whitish film is covering the mucosal surface (Figure 2). This is caused by an epithelial thickening with a marked intercellular edema in the medium and superficial strata of the epithelium. It is asymptomatic and does not cause alterations in the consistency of the epithelium. It does not show a gender predilection. It is, however, related to tobacco use. No treatment is needed. It can be removed after treatment with retinoic acid or by scraping, but it will reappear after treatment is interrupted.

Fordyce Spots—These clinical manifestations of subepithelial heterotopic sebaceous glands discharge their sebaceous secretions into the oral cavity via a small duct (Figure 3). Thus, they must be considered a condition, not a pathologic state. The spots become visible in grouping of pinhead-sized, yellowish granules, mostly on the cheek mucosa or lower lip. They appear in adulthood and affect up to 75% of the population. No treatment is needed apart from diminishing the anxiety of those patients who fear they have cancer when they first notice these spots.

Foliate Papillae (Symmetrical Ectopic Lingual Tonsil)—These extensions of the lingual tonsil on the posterior third of the lateral borders of the tongue are



Figure 7. Malformative polyp of the oral mucosa on the maxillary midline labial frenum.

a part of Waldeyer's tonsillar ring (Figure 4). Inflammatory episodes of traumatic origin can cause clinical symptoms (glossodynia); this phenomenon is known as foliate papillitis.³

Sublingual Varicosities—This condition includes dilatations of the sublingual venous system identified as small bluish elevations on the undersurface of the tongue (caviar tongue)(Figure 5). They can span to the lateral borders of the tongue, floor of the mouth, and other intraoral locations. This disorder is associated with age, cardiopulmonary disorders, and varicose disease of the extremities. The most commonly accepted pathogenic mechanism is the loss of supporting tissues secondary to degeneration of elastic fibers.⁴

Ectopic Lymphoid Tissue—Intraoral ectopic lymphoid tissue is typically found on the posterolateral borders of the tongue (lingual tonsil); however, it frequently can be found in other locations such as on the floor of the mouth, soft palate, and anterior pillar of the fauces. These white-yellowish lesions are asymptomatic, small, and dome shaped (Figure 6). They frequently are casual clinical findings. Several authors have suggested these lesions may play a role in the pathogenesis of lymphoepithelial cysts, but it

is accepted that these cysts are caused by embryonic epithelium trapped in lymphoid tissue. No biopsy is needed if a clinical diagnosis can be established. These lesions do not require treatment.

Malformative Polyp of the Oral Mucosa—This lesion is a slight developmental alteration that can be observed in a patient at birth or shortly afterwards. It is asymptomatic and does not increase in size. It is usually a solitary lesion found most frequently on the maxillary midline labial frenum (Figure 7).

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