Extended Abstract

Diseases of the Tongue; Some Unusual Lesions and Disorders †

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Many lesions and disorders of the oral cavity may affect the tongue as well. On the other hand, some lesions have a strong preference for occurrence on the tongue or may be even limited to the tongue. A selection of both categories will be discussed, emphasizing the diagnostic and management aspects.

Lymphangioma is a developmental disorder that arises at a young age. The clinical presentation is more or less diagnostic. Nevertheless, the taking of a biopsy is recommended. Treatment possibilities are limited, except for small lesions that may be removed without causing much morbidity.

Geographic tongue is not so much a rare lesion, but probably often remains undiagnosed by clinicians, particularly when occurring in children (Figure 1). A rare phenomenon is the occurrence of geographic tongue-like lesion elsewhere in the mouth, being referred to as ectopic geographic tongue or geographic stomatitis. There are no possibilities to cure geographic tongue and the disease may last lifelong.

Median rhomboid glossitis is usually easy to diagnose based on clinical features alone. If a biopsy is taken, it should be realized that the pathologist may be challenged by the presence of elongated rete ridges that may mimic squamous cell carcinoma. Treatment is only indicated in case of symptoms and consists of elimination of possible causative factors, e.g., tobacco habits and the use of corticoid inhalation spray for pulmonary disease and the use of topical antifungals. In rare instances a Kaposi sarcoma may arise in the foramen cecum area, somewhat mimicking median rhomboid glossitis. It should be realized that Kaposi sarcoma (KS) may be the first manifestation of an underlying HIV-infection. At the same time, oral KS has been reported in immunocompetent patients [1].

Lingual papillitis is a poorly understood inflammation of the fungiform papillae, showing a quite distinct clinical picture. Lingual papillitis is usually self-healing (‘Transient lingual papillitis’) [2].

Figure 1. Geographic tongue in a 3-year-old boy.
A persistent ulcer on the dorsum of the tongue may have a specific cause, e.g., syphilis I. The occurrence of a squamous cell carcinoma at that particular site is rare. A rather rare entity, mainly occurring on the tongue, is *traumatic ulcerative granuloma with stromal eosinophilia* (TUGSE). The histopathologic features are quite diagnostic. Occasionally, CD30 positive lymphocytes may indicate a peculiar type of T-cell lymphoma. In such cases the patient should be staged for possible involvement elsewhere in the body [3].

A *granular cell tumor* may occur everywhere in the body but has a strong preference for the mouth, particularly for the tongue. The diagnosis is based on histopathologic aspect. A well-known pitfall is the occurrence of pseudoepitheliomatous hyperplasia of the overlying epithelium, that may be misdiagnosed as squamous cell carcinoma.

*Lymphoid (follicular) hyperplasia* may occur on the borders of the tongue at the junction of the anterior part (‘oral tongue’) and the base of the tongue [4]. There is usually a bilateral presentation of slightly swollen, soft elastic mucosa. Symptoms are usually absent and in such event a biopsy nor follow-up is indicated. In symptomatic cases, particularly when unilateral, the possibility of a squamous cell carcinoma should be considered.

A range of lesions and conditions may present as bilateral white changes at the borders of the tongue (Table 1). These lesions can sometimes be diagnosed based on the presence of similar lesions elsewhere in the oral cavity, e.g., morsicatio, but others may require a biopsy (Figure 2). This is particularly true when *hairy leukoplakia* is suspected in a patient with a negative medical history. The histopathologic features, including positivity of an Epstein Barr Virus (EBV) immunohistochemical stain, are diagnostic. Although hairy leukoplakia is mainly known as manifestation of an underlying HIV-infection, also other causes of immunosuppression may result in this lesion.

Table 1. Differential diagnosis of bilateral white lesions of the tongue (in alphabetical order).

| Diagnosis                          |
|-----------------------------------|
| Candidiasis, hyperplastic         |
| Hairy leukoplakia                  |
| Leukoplakia (‘true’)              |
| Lichen planus                     |
| Morsicatio                        |
| Pachyonychia congenita            |
| Syphilis, second stage            |
| White sponge nevus                |

Figure 2. Verrucous lesion, bilateral, on the border of the tongue, being caused by morsicatio.

In the *second stage of syphilis* multiple white lesions (‘plaques muceuses’) may occur in the oral mucosa, often of the tongue. Another manifestation may be the occurrence of red, patchy and sometimes aphthouslike changes of the oral mucosa, particularly on the dorsal surface of the tongue. Such lesions may follow a recurrent pattern. A suspected diagnosis of syphilis should be confirmed by serological tests.

A rather unusual tumor, often benign and more or less limited to the anterior tongue, is the *ectomesenchymal chondromyxoid tumor*. The clinical presentation of the tumor is not characteristic, just
being a non-ulcerative firm elastic swelling with an intact mucosal surface. Since its first description in the nineties of the last century less than fifty cases have been reported. The challenge is with the histopathologic interpretation, including the use of various immunohistochemical stains. The tumor may be wrongly diagnosed, e.g., as a salivary gland tumor or a (rhabdomyo)sarcoma [5].

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