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Morsicatio Labiorum/Linguarum
– Three Cases Report and a Review of the Literature –

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Morsicatio is a condition caused by habitual chewing of the lips (labiorum), tongue (linguarum), or buccal mucosa (buccarum). Clinically, it often produces a shaggy white lesion caused by pieces of the oral mucosa torn free from the surface. The condition is generally found among people who are stressed or psychologically impaired. Most patients with this condition are not even aware of their biting habit. Clinically, morsicatio mimics hairy leukoplakia, and sometimes, it may be confused with other dermatologic diseases involving the oral cavity. It is rarely described in pathologic and dermatological textbooks. Histological features are distinctive, however, being careful to make a correct diagnosis can help one avoid providing inappropriate treatment. In this report we describe three cases of morsicatio, one that developed in the lower lip and the others that developed on the side of the tongue.

Key Words : Morsicatio; Bites; Lip; Tongue

Morsicatio is a form of self-inflicted injury.[1-9] Morsus is the Latin word for "bite",[9] and morsicatio buccarum refers to biting or chewing the buccal mucosa, morsicatio labiorum is a chewing of the lip tissue, and morsicatio linguarum is chewing of the borders of the tongue.[9] Patients with this condition have a compulsive neurosis that causes habitual tongue or lip biting. Patients actually hold pieces of mucosa between their teeth and tear them free, producing a distinctive clinical appearance.[2,7] The lesions are usually bilateral, although sometimes they are limited to one location, depending on the parafunctional habits of the patient.[2] Most dentists are familiar with morsicatio buccarum et labiorum and seldom examine it via biopsy.[1,7] However, it is rarely described in pathologic or dermatological textbooks, so dermatologists and pathologists are generally unfamiliar with this condition. Morsicatio can be confused clinically with other mucosal diseases, such as lichen planus, pemphigus, benign mucosal pemphigoid, candidiasis, and leukoplakia. A correct pathologic diagnosis can avoid mistreatment.[2,6,7]

Reported cases of morsicatio labiorum/linguarum are rare.[5,7,8] Herein, we report one case of morsicatio labiorum and two cases of morsicatio linguarum.

CASE REPORTS

Patient 1

A 22-year-old Korean woman presented with a yellowish hyperkeratotic plaque on the lip. She had been treated with corticosteroid for this disease at a local clinic for six months, but it aggravated the symptoms. Her medical history was unremarkable. She mentioned that she habitually chewed and bit her lip, and she reported recent stress experienced when applying for jobs. The initial clinical impression was a diagnosis of sebaceous hyperplasia, and a punch biopsy was performed. The biopsy showed hyperkeratotic mucosal epithelium covered by irregular basophilic debris in which colonies of Gram-positive bacilli and cocci were admixed (Fig. 1). A histological diagnosis of morsicatio labiorum was made. After the pathologic diagnosis was made, the lesion was regressed simply by interrupting the corticosteroids and ending the patient's habitual biting.

Patient 2

A 40-year-old Korean man presented with whitish patch on

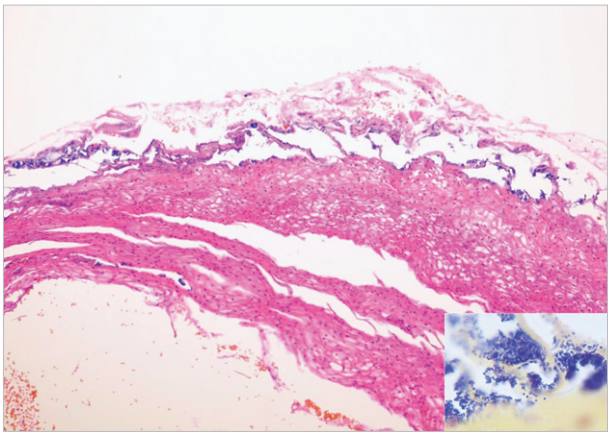

Fig. 1. The biopsy showing hyperkeratotic mucosal epithelium covered by an irregular basophilic debris in which colonies of Gram positive bacilli and cocci (inset) are admixed.

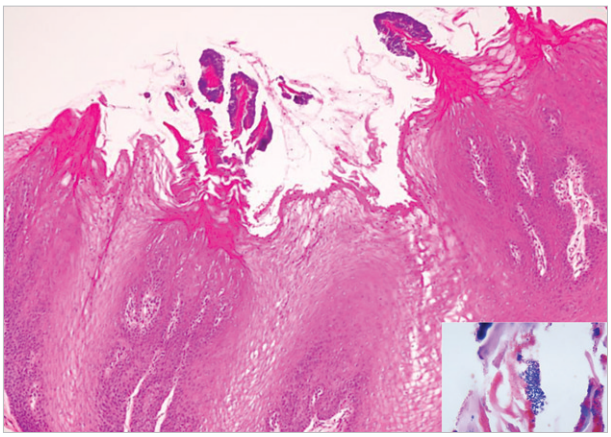

Fig. 3. Histological findings showing acanthosis, papillomatosis, hyperkeratosis, and bacterial colonies (inset).

the lateral border of his tongue that had been present for seven years. He was transferred to our hospital with an preliminary clinical diagnosis of lichen planus. He was generally healthy and his clinical history was unremarkable. He reported feeling continuous discomfort, but denied mucosal biting or chewing. On clinical examination, the affected area of the tongue showed an irregular whitish patch with corrugated projections and superficial erosions. The blood and biochemical tests were within normal limits, and a HIV test was negative. Because of the clinical impression of lichen planus, a punch biopsy of the tongue was performed. The biopsy showed epithelial hyperplasia with acanthosis, hyperkeratosis, and orthokeratosis (Fig. 2). Mild inflammatory infiltration was present in the subepithelial stroma, and Gram-positive bacterial colonies were present at the corrugated mucosal surface. A histological diagnosis of morsicatio linguarum was made. After a treatment course of antibacterial ointment applied

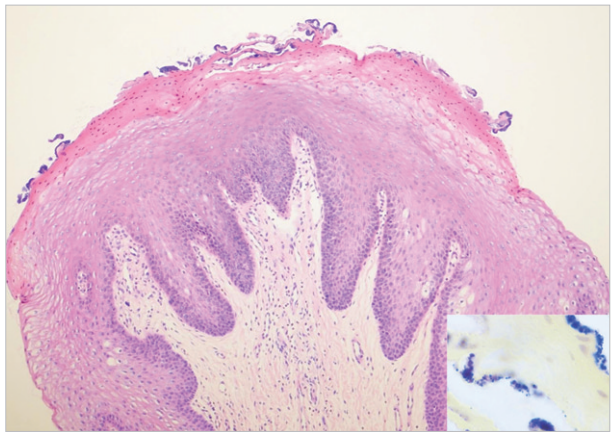

Fig. 2. The biopsy showing acanthosis, hyperkeratosis and Gram positive bacterial colonies (inset) at corrugated mucosal surface.

to the affected area, the lesion regressed.

Patient 3

A 63-year-old Korean man presented with a reddish patch on the left lateral border of the tongue which had been present for several years. He visited the department of otolaryngology at our hospital. He was generally healthy, and his clinical history was unremarkable. The blood and biochemical tests were within normal limits. A punch biopsy of the tongue showed a corrugated surface with acanthosis, hyperkeratosis, and orthokeratosis (Fig. 3), and Gram-positive bacterial colonies were present at the corrugated mucosal surface. No inflammatory infiltration was present in subepithelial stroma. A histological diagnosis of Morsicatio linguarum was made, but the patient did not follow up with treatment.

DISCUSSION

Morsicatio labiorum/linguarum/buccarum is one of several self-inflicted or factitious injuries to the oral mucous membranes. Previous authors[1-7] have thought that this results from a habitual biting or chewing of the oral mucosa.

Clinical lesions result from torn-off ragged oral mucosa consisting of small superficial erosions alternating with white scaly areas. The scales are loose and can be removed easily. The lesions regress once the biting of the cheek, lip or tongue stops. The lesion is not considered to be potentially malignant.[6]

Clinically, the syndrome closely resembles moniliasis and can be confused with other dermatologic diseases involving the oral

mucosa, such as oral lichen planus, pemphigus, benign mucosal pemphigoid, linea alba, or oral white sponge nevus.[2,7,8] A biopsy is essential to prevent misdiagnosis and incorrect treatment. The histopathological features are distinctive. Histopathologically, the hyperplastic epithelium shows acanthosis and hyperkeratosis with an irregular torn surface at which Gram-positive bacterial colonies and basophilic debris are present.[2,7,8] A thin layer of necrotic keratinocytes can be seen immediately beneath the basophilic debris. In the stratum spinosum there are markedly swollen keratinocytes which display PAS-positive, diastase-digestible material consistent with glycogen. Mild chronic inflammatory infiltration can be seen in the stroma. Despite the distinctive histopathology, biopsy specimens had previously been misinterpreted as nonspecific chronic inflammation of the oral mucosa.

The histopathological features in our cases were similar to those in previously reported cases.[1-3,7-9] There was acanthosis of the mucosal epithelium with an irregular, ragged surface. Basophilic debris containing Gram-positive bacterial colonies was present on the desquamating epithelium, and this debris may play a role similar to culture media in promoting bacterial growth. It is thought that the surface irregularity of the oral mucosa may precede the onset of biting habits,[2] and patients feel compelled to remove the lesion by manipulation.[7] In one study in the dental literature, the authors[5] surveyed chewing lesions of the cheek and lip from 1,255 children in training school. Among them, 58 children (4.6%) had lesions similar to those from morsicatio, with 35 (2.7 %) having lesions in both cheeks, 16 (1.2%) having lesions in one cheek, 4 (0.3%) having lesions on the lip and both cheeks, and 3 (0.2%) having lesions only on the lip. Hjorting-Hansen and Holst[3] studied 17 patients with self-induced oral mucous membrane lesions. They grouped the lesions into two groups: the biting types, or morsicatio mucosae oris, and the sucking types, suctio mucosae oris. All of the cases described here and all previously reported cases of self-induced oral mucous membrane lesions are of the the biting type.

In one of our cases, the clinical impression was oral lichen planus, and the patient was treated with corticosteroid, but it aggravated the patient's symptoms. After the histological diagnosis of morsicatio, the patient stopped her habitual biting, and the lesion regressed uneventfully. The implication is that a biopsy is essential in order to distinguish between morsicatio and other mucosal lesions such as oral leukoplakia, candidiasis, lichen planus, white sponge nevus, epulis, traumatic ulcer, irritating fibroma, and para-neoplastic white lesion. Recognizing the distinctive histopathological pattern of morsicatio is critical to making a correct diagnosis and to applying the correct treatment.

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