

## A case series of allergic stomatitis

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### Abstract

Intraoral allergic contact stomatitis is a rare entity whose frequency is considerably lower than the frequency of contact dermatitis. We report 3 cases of allergic stomatitis in 3 different intraoral sites which presented with stomatitis after intake of outside food, otherwise, all these patients were healthy. Patients might approach dentists, dermatologists, otorynolaryngologists, and allergists due to the oral condition; therefore, a multidisciplinary approach is suggested. Therefore, all aforementioned specialists should be aware of contact reactions to correctly diagnose and manage this condition.

**Keywords:** Allergic Stomatitis; Contact dermatitis; Burning sensation; Cinnamon

### 1. Introduction

The frequency of contact stomatitis is considerably lower than the frequency of contact dermatitis due to the following reasons: 1) the allergens are rapidly dissolved by saliva before they pass through and are digested with the help of the enzymes, 2) oral mucosa contains a number of blood vessels, therefore potential antigens crossing the oral mucosa barrier are quickly removed before the allergic reaction occurs, 3) oral mucosa contains less keratin than the skin, hence, the possibility of binding hapten to protein is reduced [1]. Re-exposure to the cinnamon product had resulted in development of similar lesions at the same site within 24 hours [3]. For those lesions which do not promptly resolve upon cinnamon withdrawal, diagnostic biopsy should be considered to exclude the possibility of a squamous cell carcinoma. Here we report 3 cases of Allergic Stomatitis in various regions intraorally.

### 2. Case 1

A 20 year old female patient reported to the Department of Oral medicine and radiology with the chief complaint of burning sensation in the soft tissue region below the tongue for past 1 day. The patient gave a history of continuous burning sensation for past 1day and occurrence after having fish from a new restaurant. The patient has no relevant medical history. Extra oral examination revealed no significant facial asymmetry. The temporomandibular joint examination revealed no significant pain, clicking sound, and jaw deviation. The lymph node examination also revealed no significant palpable lymph nodes in the head and neck region.

On intraoral soft tissue examination, multiple ulcers were present in the right and left side of the floor of the mouth (Fig 1 & Fig 2). The ulcers were associated with pain and burning sensation, it was well-defined and smaller in size of about 0.5cm. On palpation, all the inspectory findings are confirmed, it was tender on palpation. No abnormalities were detected in buccal mucosa, labial mucosa and vestibule.

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She was prescribed Tab.Levocetrizine (OKACET) 10 mg once daily for 3 days along with local anesthetic gel Lignocaine 2%. After a week, lesion got subsided.



**Figure 1** Intraoral photographs showing ulcers in right side of floor of the mouth



**Figure 2** Intraoral photographs showing ulcers in left side of floor of the mouth

### 2.1. Case 2

A 19 year old female patient reported to the Department of Oral medicine and radiology with the chief complaint of burning sensation in the labial mucosa for past 2 days. The patient gave history of continuous burning sensation for past 2 days and occurrence after having nuts from a new

Shop. The patient has no relevant medical history. Extra oral examination revealed no significant facial asymmetry. The temporomandibular joint examination revealed no significant pain, clicking sound, and jaw deviation. The lymph node examination also revealed no significant palpable lymph nodes in the head and neck region. On intraoral soft tissue examination, a white lesion surrounded by erythematous margins in the labial mucosa was present (Fig 3). They were associated with pain and burning sensation. The ulcers were well-defined and smaller in sizes of about 0.5cm. The ulcers were present in the labial mucosa dispersed randomly. On palpation, it was tender and soft in consistency. No abnormalities were detected in buccal mucosa, floor of the mouth and the vestibule.

She was prescribed Tab.Levocetrizine (OKACET) 10 mg once daily for 3 days along with local anesthetic gel Lignocaine 2%. After a week, lesion got subsided.



**Figure 3** Intraoral photograph showing ulcers in labial mucosa

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### 3. Case 3

A 19 year old male patient reported to the Department of Oral medicine and radiology with the chief complaint of burning sensation in the tongue for past 1 day. The patient gave a history of continuous burning sensation for past 1 day and occurrence after having food from hostel. The patient has no relevant medical history. Extra oral examination revealed no significant facial asymmetry. The Temporomandibular joint examination revealed no significant pain, clicking sound, and jaw deviation. The lymph node examination also revealed no significant palpable lymph nodes in the head and neck region. On intraoral soft tissue examination, erythematous area was present along the lateral surface of the tongue (Fig 4). The lesion was associated with pain and burning sensation. On palpation, it was tender. No abnormalities were detected in buccal mucosa, labial mucosa and the vestibule.

He was prescribed Tab.Levocetizine (OKACET) 10 mg once daily for 3 days along with local anesthetic gel Lignocaine 2%. After a week, lesion got subsided.



**Figure 4** Intraoral photograph showing erythematous lesions in lateral borders of the tongue

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### 4. Discussion

The clinical presentation of intraoral allergic contact reactions varies greatly, and as a result, clinicians often do not recognize this clinical entity leading to misdiagnose. The same authors described a few cases of contact allergy to candy, chewing gum, mouthwash, lip sunscreen, cinnamon toast, volatile oils, and toothpaste [5].

Calapai et al. reported that signs and symptoms of contact intraoral allergic reactions might mimic other common oral disorders, making true diagnosis difficult [6]. Clinical presentation of contact stomatitis might be very variable and includes oedema, leukoplakic, erythroplakic, or ulcerative changes, which might be accompanied by a burning sensation [7, 8]. Differential diagnosis in this case might be lichenoid reaction to other oral agents, oral adverse reaction to certain drugs, erythroleukoplakia, discoid lupus erythematosus, squamous cell carcinoma, etc. Histology might be rather non-specific [7]. However, Miller et al. described hyperkeratosis, chronic lichenoid mucositis with plasmacytic infiltration, and marked chronic perivasculitis. Therefore, Miller et al. suggest that when aforementioned histopathologic features are recognized, cinnamon stomatitis should be considered [9]. Treatment relies upon the elimination of the allergen containing products, advised all the patients to avoid outside food for few days and provided symptomatic care.

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## 5. Conclusion

Proper history leads to accurate diagnosis of allergic Stomatitis. Removal of allergens and giving timely symptomatic therapy leads to the healing of the patient. This will also prevent the recurrence of the disease.

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## Compliance with ethical standards

### *Disclosure of conflict of interest*

The authors declare that they have no conflict of interest.

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