

# Etiology and Treatment for the Chemical Injuries of Oral Mucosa

Daniela Kusiak\*

*Department of Periodontology and Oral Mucosa Diseases, Medical University of Gdansk, Gdansk, Poland*

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## Oral Mucosal Trauma and Injuries

Oral lesions caused by trauma are common in dental practise. These lesions can affect patient's normal oral function and cause pain when they eat, chew, or speak. If the causal component is removed after acquiring an anamnesis diagnosis, treatment can be given. Physical, chemical, or thermal trauma can cause damage to the oral mucosa. Accidental tooth bites, hard food, sharp tooth edges, heated food, and excessive tooth brushing can all cause such injuries. Iatrogenic injuries during dental treatment or other treatments involving the mouth cavity can also result in injuries. A proposed classification of oral mucosal trauma and injuries is detailed in the following [1]. Oral mucosal trauma and injuries are classified as follows: Physical and mechanical traumas to the oral mucosa, chemical injuries, and radiation injuries, electrical and thermal burns. Linea alba, chronic biting, epulis fissuratum, inflammatory papillary hyperplasia, denture stomatitis, traumatic ulcer, recurrent aphthous stomatitis, nicotine stomatitis, lip-licking dermatitis, traumatic fibroma, and trauma associated with sexual practise are examples of physical and mechanical trauma to the oral mucosa. Chemical burns, post-anesthetic ulceration of the palate, and contact allergic stomatitis are all examples of chemical injuries to the oral mucosa. Oral mucositis and actinic cheilitis are examples of radiation injuries [2].

## Chemical Injuries of Oral Mucosa

### *Chemical Burns*

**Etiology:** These are most commonly found in the gingiva and mucobuccal folds. The wounds are uneven in shape and colour, have a pseudomembrane covering them, and are extremely painful. Lesions can spread over a large area. A superficial white and wrinkled look appears if the lesions are contacted quickly. Necrosis cannot be caused by a brief touch. When caustic chemicals and medicinal materials come into contact with the oral mucosa, they can produce irritation and direct mucosal damage. Mucosal damage can occur when drugs are used incorrectly, such as when aspirin is applied to the adjacent mucosa of aching teeth with decay. Iatrogenically, irrigant solutions (sodium hypochlorite or formalin) or some endodontic pastes containing arsenic might irritate the mucosa during dental procedures. However, since the advent of the rubber dam in dental treatment, such accidents have become less common.

**Treatment:** Preventing chemical burns in the mouth is the best treatment. Iatrogenic chemical burns can be avoided by using a rubber dam during endodontic operations. Because the turnover of oral mucosa is so fast, superficial mucosa burns can heal quickly (within 1 or 2 weeks) [5]. In very rare circumstances, oral surgery and antibiotics are required. Hyaluronic acid gel

can help speed up the healing process. Topical and intralesional corticosteroids, caustic acid ingestion, commissuroplasty, mucosal flaps, free radial forearm flap, free jejunal graft, electrocautery or soft tissue laser surgeries, and wound coverage by periodontal pack are all possible treatments after chemical injuries, depending on the severity of the wounds [3].

### *Post-anesthetic Ulceration of the Palate*

**Etiology:** On the palatal mucosa, post-anesthetic ulcers caused by oral nerve block can be noticed. Local anaesthetic injections can cause tissue ischemia and necrosis. This can be caused by the irritating quality of a solution, pressure from huge volumes, or vasopressor-induced constriction of the vasculature. The ulcer's floor is covered in grayish-white necrotic slough with a sloping border and erythematous margins, and the ulcer is slightly sensitive on probing with no indurations. Following the quick injection of local anaesthetic solutions, particularly those containing a vasoconstrictor, post-anesthetic ulceration can occur.

**Treatment:** Typically, management is conservative. Reassuring the patient, giving analgesics, and combining topical antiseptic and anaesthetic medications are the major components. Healing usually takes 8–10 days from the time the lesion appears. When an ulcer does not heal, surgical intervention may be required. An orabase paste that is protective and emollient can also be recommended [4].

### *Contact Allergic Stomatitis*

**Etiology:** Denture base materials, restorative materials, mouthwashes, dentifrices, chewing gums, food, and other things come into contact with the oral mucosa can cause contact allergic stomatitis. Touch stomatitis can be caused by a variety of chemical or natural substances coming into contact with the mucosa. By coming into contact with mucosal surfaces, cinnamaldehyde or cinnamon essential oil, which are extensively employed as flavouring ingredients in meals, beverages, candies, and hygiene products, can cause allergic stomatitis. Diffuse erythema, edoema, tiny vesicles, and shallow erosions occur on the afflicted mucosal surfaces almost immediately after contact with the allergen. Lesions are linked to a burning sensation. A white hyperkeratotic, erythematous lesion forms in those with chronic allergies.

**Treatment:** An accurate examination and a thorough understanding of the patient's medical history are required to identify contact allergic stomatitis. The diagnostic ability and expertise of the clinician are critical in avoiding unnecessary tests and invasive and costly diagnostic treatments. Removal of potential allergens, topical or systemic corticosteroids, and antihistamines are among the treatments [5].

## References

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