Chapter 8

Oral ulcers: In clinical aspects

Ranganayaki M[a], Santhosh S[a], J.Monisha[b*]

[a]*School of Pharmaceutical Sciences, Vels Institute of Science, Technology & Advanced Studies, Chennai*

[b]*Assistant Professor, Department of Pharmaceutics, SPS, Vels Institute of Science, Technology & Advanced Studies, Chennai*

** Corresponding Author: monisha.sps@vistas.ac.in*

Abstract

Oral ulcers are generally painful lesions that are related to various conditions developing within the oral cavity. They can be classified as acute or chronic according to their presentation and progression. Acute oral ulcers are associated with conditions such as trauma, recurrent aphthous stomatitis, Behcet's disease, bacterial and viral infections, allergic reactions, or adverse drug reactions. Chronic oral ulcers are associated with conditions such as oral lichen planus, pemphigus vulgaris, mucosal pemphigoid, lupus erythematosus, mycosis, and some bacterial and parasitic diseases. The correct differential diagnosis is necessary to establish the appropriate treatment, taking into account all the possible causes of ulcers in the oral cavity. In this second part of this two-part review, chronic oral ulcers are reviewed

Keywords: *Chronic oral ulcers, acute oral ulcers, bacterial, parasitic diseases.*

1. Introduction

ISBN 978-816855381-1

Secondary lesions with a loss of tissue are called ulcers. They are extremely prevalent lesions of the oral mucosa that impact both the epithelium and the underlying connective tissue. A loss of tissue affecting both the epithelium and underlying connective tissue characterizes ulcers, which have a variety of causes. They tend to be unpleasant and are quite prevalent in the oral mucosa.

Knowing the relative frequency or prevalence of these lesions at a specific time and location is crucial for making a diagnosis. Axe Ell discovered in 1976 that the most prevalent oral mucosal lesions in Sweden were ulcers (aphthae) linked to recurrent aphthous stomatitis, followed by those linked to prosthesis-induced stomatitis, recurrent herpes labialis, and geographic tongue.

2. Acute oral ulcers

Recurrent aphthous disease

Recurrent aphthous stomatitis (RAS) is an inflammatory condition whose exact cause remains unknown, marked by the occurrence of painful mouth ulcers (aphthae) that recur. It is prevalent in approximately 20% of the overall population, making it the most frequently encountered type of oral ulceration. There are several factors considered to contribute to the onset of RAS, such as genetic traits from families, immune system reactions, hormonal fluctuations, allergic responses to specific foods, medications, deficiencies in blood, lack of zinc, psychological stress, tobacco use, local injuries, infectious organisms, and various systemic health issues. Aphthae appear to be less frequent among individuals who smoke, indicating that tobacco may have a protective effect.

There are three distinct clinical types: minor aphthae, major aphthae, and herpetiform aphthae.

The most frequent type, minor aphthae, accounts for about 80% of cases. These lesions typically manifest as 1-5 clearly defined superficial ulcers that are either round or oval in shape and measure less than 10 mm in diameter, covered with a whitish or grayish membrane, and bordered by a red halo. They generally occur on non-keratinized mucosal areas and are uncommon on keratinized gingiva, the roof of the mouth, or the surface of the tongue. These lesions can appear over various periods and usually resolve within 10 to 14 days without leaving scars.

Major aphthae (10%), also referred to as periadenitis mucosa necrotica recurrens or Sutton's disease, share similarities with minor aphthae but are larger in size (exceeding 10 mm) and cause significant pain. They can present as single ulcers or clusters of multiple lesions. While they can develop in any region, they tend to favor the lips.

3. Behcet's disease

BD causes inflammation in blood vessels, with recurring mouth and genital sores, skin rashes, and eye, muscle, heart, stomach, and nerve issues. 12, 25 It often starts in a person's 30s or 40s. Genetics, environment, infections, the immune system, and blood factors may play a part. Mouth sores, big, small, or herpetiform, show up in the mouth, on the gums, on the lips, on the soft palate, and in the throat. These sores usually appear in everyone.

3.1 Necrotizing sialometaplasia

Necrotizing sialometaplasia is a rare condition causing large ulcerative lesions with very hard borders that are mainly located on the hard and/or soft palate. It is a non-cancerous and self-resolving necrotizing inflammatory disease of the minor salivary glands but

ISBN 978-816855381-1

may be mistaken for a malignant tumor. The main reason is thought to be ischemia secondary to injury or to damage from a chemical or biological agent.

Necrotizing sialometaplasia is a rare condition causing large ulcerative lesions with very hard borders that are mainly located on the hard and/or soft palate.

4. Principles of topical treatment for oral mucosal conditions

A thorough medical history and oral examination of the patient, along with additional diagnostic techniques, are crucial for obtaining a precise diagnosis of oral ulcers. The diagnosis, the severity of the oral condition, and whether or not there are accompanying extraoral lesions are the primary factors that guide the choice of topical treatment.

Figure 1: Oral mucosal conditions

Patients should steer clear of precipitating factors if they exist (for instance, in cases of traumatic ulcers). Infectious conditions (whether viral, bacterial, or fungal) must be treated with suitable topical and/or systemic medications (antivirals, antibiotics, or antifungals). For oral ulcers with undetermined causes or those associated with autoimmune d isorders, topical corticosteroids (TC) play a central role

in their management.

References

[1] Bascones A, Llanes F. Medicina Bucal, 2nd edn. Madrid: Avances Médico-dentales, 1996: 93–94, 241–52.

[2] Bascones A, Figuero E, Esparza GC. Oral ulcers. Med Clin (Barc) 2005; 125: 590–7.

[3] Porter SR, Leao JC. Review article: oral ulcers and its relevance to systemic disorders. Alimen Pharmacol Ther 2005; 21: 295–306.

[4] Shulman JD, Beach MM, Rivera-Hidalgo F. The prevalence of oral mucosal lesions in U.S. adults: data from the Third National Health and Nutrition Examination Survey, 1988–94. J Am Dent Assoc. 2004; 135: 1279–86.

[5] Esparza-Go´mez GC, Llamas-Martı´nez S, Bascones Martı´nez A. Lesiones con pe´rdida de sustancia: U ´lceras. In: Tratado de Medicina Interna, 1st edn (Perezagua-Clamagirand C, ed). Barcelona: Ariel, 2005. pp. 40–43.

[6] Lucavechi T, Barberı´a E, Maroto M, Arenas M. Self-injurious behavior in a patient with mental retardation: review of the literature and a case report. Quintessence Int 2007; 38: e393–8.

[7] Tugsel Z, Sezer B, Akalin T. Facial swelling and palatal ulceration in a diabetic patient. Oral Surg Oral Med Oral Pathol Oral Radiol Endod 2004; 98: 630–6.

[8] Hasson O, Levi G, Huszar M. Scleroma of the soft and hard palates. J Oral Maxillofac Surg 2005; 63: 1536–8.

[9] Motta AC, Lopes MA, Ito FA, et al. Oral leishmaniasis: a clinicopathological study of 11 cases. Oral Dis. 2007; 13: 335–40. 10. Pilolli GP, Lucchese A, Scivetti M, et al. Traumatic ulcerative granuloma with stromal eosinophilia of the oral mucosa: histological and immunohistochemical analysis of three cases. Minerva Stomatol 2007; 56: 73–9. 32 Scully C, Felix DH. Oral medicine update for the dental practitioner. Oral cancer. Br Dent J 2006; 200: 13–17

ISBN 978-816855381-1