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Oral Ulcers: Diagnosis a Dilemma?

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Abstract: ***Oral ulcers are characterised by a loss of the mucosal layer within the mouth. This loss may be acute or chronic, localised or diffuse. This is one of the most common oral problems presenting in primary care and can arise as a result of a number of disorders. Some of these relate to problems around the oropharynx but there is a wide variety of systemic disorders that can also give rise to these lesions. Recurrent aphthous stomatitis (RAS) is the most common chronic disease of the oral cavity, affecting 5-25% of the population. The underlying aetiology remains unclear, and no curative treatment is available. The present review examines the existing treatments for RAS with the purpose of answering a number of questions: How should these patients be treated in the dental clinic?***

This article reports cases of recurrent apthous ulcer that presented with oral and lip ulcerations and highlights the importance of early diagnosis and proper management.

Keywords: Oral Ulcers, Apthous Ulcer.

INTRODUCTION

Recurrent aphthous stomatitis (RAS) is a common condition, restricted to the mouth, that typically starts in childhood or adolescence as recurrent small, round, or ovoid ulcers with circumscribed margins, erythematous haloes, and yellow or gray floors. A positive family history of similar ulcers is common, and the natural history is typical of resolution in the third decade of life.

Not all ulcers that recur are RAS and this has led to some significant confusion in this field. Ulcers with similar clinical features but rarely resolving spontaneously with age may be associated with systemic conditions such as Behçet syndrome, auto-inflammatory syndromes, gastrointestinal disease, or immune defects such as HIV/AIDS

Aphthous mouth ulcers are painful sores that can occur anywhere inside the mouth. They are the most common type of mouth ulcer. At least 1 in 5 people can develop aphthous mouth ulcers at some stage in their life. Women are affected more often than men

CASE REPORT

A 21-year-old female patient presented to the dental OP department with the complaint of painful ulcerations of the oral cavity for the past 5 days. She gave a history of the development of a single ulcer within the mouth for which she was given Injection Avil and Injection Inac 3cc after which the ulcers subsided. The patient reported back 3 months later with similar ulcers and this time patient was pregnant and in her first trimester (1st month) of pregnancy.

She gave a history of multiple vesicles of the oral mucosa, buccal, and labial mucosa, which ruptured to form painful ulcerations. After 2 days she developed ulceration of lips and tongue. The patient was unable to eat any hot and spicy food and was on liquid diet for the last 2 days.Extraoral examination showed extensive ulcerations with bloody crustations on the upper and lower lip. Intraorally multiple ulcerations of the buccal and labial mucosa. Tongue showed white coating on the dorsal surface with irregular ulcerations of the right lateral border.

Irregular lip ulcerations with blood encrustations

Irregular buccal mucosal and tongue ulcerations with lip lesions

The patient was administered Injection Triamcinolone intramuscular 1ml, injection Optineuron 1 ampule both administered once daily with injection Augmentin administered twice and Injection Metrogyl 100ml administered twice daily along with betadine mouthwash.

Post-operative

DISCUSSION

Aphthous stomatitis (also termed recurrent aphthous stomatitis, recurring oral aphthae or recurrent aphthous ulceration; from Greek: αφθα *aphtha*, "mouth ulcer") is a common condition characterized by the repeated formation of benign and non-contagious mouth ulcers (aphthae) in otherwise healthy individuals. These ulcers occur periodically and heal completely between

attacks. In the majority of cases, the individual ulcers last about 7–10 days, and ulceration episodes occur 3–6 times per year. Most appear on the non-keratinizing epithelial surfaces in the mouth (i.e. anywhere except the attached gingiva, the hard palate and the dorsum of the tongue), although the more severe forms, which are less common, may also involve keratinizing epithelial surfaces.

The etiology of recurrent aphthous stomatitis (RAS) is not entirely clear, and aphthae are therefore termed idiopathic. RAS may be the manifestation of a group of disorders of quite different etiology, rather than a single entity

There are three types:

- Minor aphthous ulcers are the most common (8 in 10 cases). They are small, round, or oval, and are less than 10 mm across. They look pale yellow, but the area around them may look swollen and red. Only one ulcer may develop, but up to five may appear at the same time. Each ulcer lasts 7-10 days and then goes without leaving a scar. They are not usually very painful.
- Major aphthous ulcers occur in about 1 in 10 cases. They tend to be 10 mm or larger across. Usually only one or two appear at a time. Each ulcer lasts from two weeks to several months but will heal leaving a scar. They can be very painful and eating may become difficult.
- Herpetiform ulcers occur in about 1 in 10 cases. These are tiny pinhead-sized ulcers, about 1-2 mm across. Multiple ulcers occur at the same time, but some may join together and form irregular shapes. Each ulcer lasts one week to two months. Despite the name, they have nothing to do with herpes or the herpes virus.

Aphthous ulcers usually first occur between the ages of 10 and 40 years. They then recur but there can be days, weeks, months, or years between each bout of ulcers. The ulcers tend to come back (recur) less often as you become older. In many cases, they eventually stop coming back. Some people feel a burning in part(s) of the mouth for a day or so before an ulcer appears.

.Despite many studies trying to identify a causal microorganism, RAS does not appear to be infectious, contagious, or sexually transmitted. Immune mechanisms appear at play in persons with a genetic predisposition to oral ulceration.

A genetic basis exists for some RAS. This is shown by a positive family history in about one-third of patients with RAS; an increased frequency of human leukocyte antigen (HLA) types A2, A11, B12, and DR2; and susceptibility to RAS, which segregates in families in association with HLA haplotypes. RAS probably involves cell-mediated mechanisms, but the precise immunopathogenesis remains unclear. Phagocytic and cytotoxic T cells probably aid in the destruction of oral epithelium that is directed and sustained by local cytokine release.

Patients with active RAS have an increased proportion of gamma-delta T cells compared with control subjects and patients with inactive RAS. Gamma-delta T cells may be involved in Antibody-dependent cell mediated cytotoxicity (ADCC). Compared with control subjects, individuals with RAS have raised serum levels of cytokines such as interleukin (IL)–6 and IL-2R, soluble intercellular adhesion modules (ICAM), vascular cell adhesion modules (VCAM), and E-selectin; however, some of these do not correlate with disease activity.

Cross-reactivity between a streptococcal 60- to 65-kd heat shock protein (hsp) and the oral mucosa has been demonstrated, and significantly elevated levels of serum antibodies to hsp are found in patients with RAS. Lymphocytes of patients with RAS have reactivity to a peptide of *Mycobacterium tuberculosis.* Some cross-reactivity exists between the 65-kd hsp and the 60-kd human mitochondrial hsp. Monoclonal antibodies to part of the 65-kd hsp of *M tuberculosis* react with *Streptococcus sanguis.* RAS thus may be a T cell–mediated response to antigens of *S sanguis*, which cross-react with the mitochondrial hsp and induce oral mucosal damage. RAS patients have an anomalous activity of the toll-like receptor TLR2 pathway that probably influences the stimulation of an abnormal Th1 immune response.

Predisposing factors found may include any of the following:

- Cessation of smoking: This may precipitate or exacerbate RAS in some cases.
- Stress: This underlies RAS in some cases; ulcers appear to exacerbate during school or university examination times.
- Trauma: Biting of the mucosa and wearing of dental appliances may lead to some ulcers; RAS is uncommon on keratinized mucosae.
- Endocrine factors in some women: RAS is clearly related to the progestogen level fall in the luteal phase of the menstrual cycle, and ulcers may then temporarily regress in pregnancy.
- Allergies to food: Food allergies occasionally underlie RAS; the prevalence of atopy is high. Patients with aphthae may occasionally have a reaction to cow's milk, and may have been weaned at an early age.
- Sodium lauryl sulphate (SLS): This is a detergent in some oral healthcare products that may aggravate or produce oral ulceration.

Aphthous-like ulcers may be seen in the following:

- Hematinic deficiency: Up to 20% of patients are deficient in iron, folic acid (folate), or vitamin B.
- Malabsorption in gastrointestinal disorders: About 3% of patients experience these disorders, particularly celiac disease (gluten-sensitive enteropathy) but, occasionally, Crohn disease, pernicious anemia, and dermatitis herpetiformis. HLA DRW10 and DQW1 may predispose patients with celiac disease to oral ulceration.

- Immune deficiencies: Ulcers (aphthous-like ulcers) may be seen in patients with HIV, neutropenias, and some other immune defects.
- Drugs, especially NSAIDs, alendronate, and nicorandil : These may produce mouth ulcers, but the history should distinguish them from RAS.

CONCLUSION

Aphthous mouth ulcers can be painful and are often a nuisance, but are not serious. Occasionally a mouth ulcer can become secondarily infected with germs (bacteria). In this case, you may notice increased pain or redness, or you may be feeling unwell with a high temperature (fever). Secondary bacterial infections are not common but may need treatment with antibiotic medicines. Remember, not all mouth ulcers are aphthous ulcers. Other types of ulcer *can* occur in the mouth and mouth ulcers can be a sign of an underlying illness or disease.

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