

# MANAGEMENT OF RECURRENT ULCERS OF THE MOUTH — CURRENT CONCEPTS

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## SYNOPSIS

Recurrent oral ulceration is a very painful condition and the severe types seriously affect the quality of life by interfering with mastication and speech. Management of patients with recurrent ulcers is often difficult owing to the fact that the aetiology of the condition remains obscure. This often leads to multiple consultations leading to confusion. Oral mucosal ulcers persists for a few days and recur after various lengths of time with remission. Due to the special environmental factors in the oral cavity, various conditions both systemic and local can present in the form of ulcers. Often, arriving at the correct diagnosis can be a challenging situation for the clinician. In this paper, an attempt is made to detail the points of importance in arriving at diagnosis and presenting an approach to the management of the recurrent ulceration of oral mucosa.

## PROBLEMS IN DIAGNOSIS

In diagnosing ulcerative lesions of the oral cavity, the practitioner can be confronted with many pathological states having a similar clinical appearance. The oral mucosa is thin compared to skin and the bullae and vesicles break rapidly giving rise to ulcers. The moist environment always present in the mouth is another contributory factor. Furthermore, the masticatory forces tend to traumatise the mucosa often in the moist environment leading to ulcers. In arriving at the diagnosis, the practitioner is well advised to elicit a detailed history including the time of onset and details regarding the recurrence with periods of remission. It is important to record the number, size, site and distribution of the ulcers and elicit any systemic abnormal states like anaemia, blood dyscrasia, infection, skin, eye, gastero intestinal or genital disease.

Typical features to note in this condition are that the ulcers are usually round or ovoid in shape and are self limiting. Most of them are normally found in non keratinised mucosa and heal in about ten days. Minor apthae (Fig. 1), the commonest variety seen are about 2—4 mm in diameter and usually form in crops. Very often the onset is in childhood or adolescence and a family history may be present. Major apthous ulcer is an uncommon lesion. They are deep lesions larger than 1 cm in diameter (Figs 2 & 3). The lesion may last for months and heal with scarring. This may result in decreased mobility of the uvula and tongue. In the herpetiform type, the ulcers of varying sizes form in crops of ten or more with widespread erythema (Fig. 4). Histological features of the lesion are non specific (Fig. 5). It is basically an intra epithelial lesion showing degenerating cells. The surface may be covered by fibrin, polymorphonuclear leukocytes and degenerated cells.

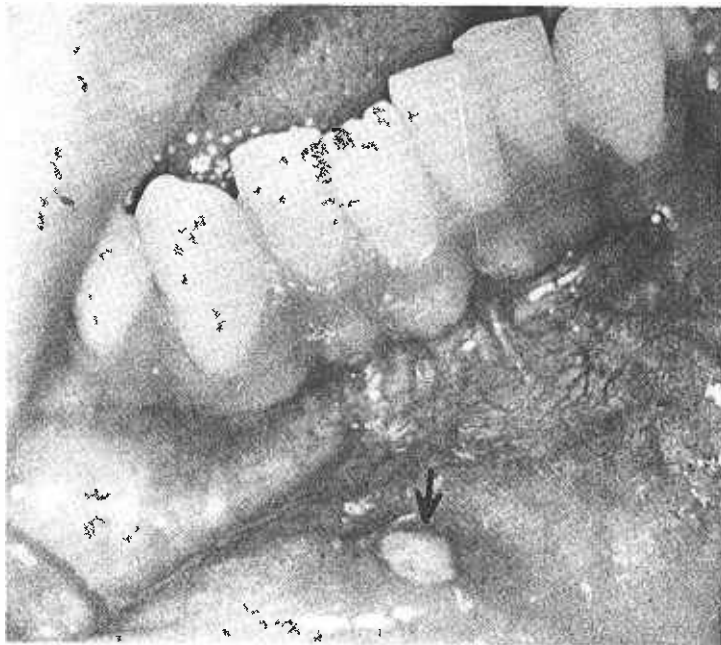


Figure 1: Recurrent apthous ulcer of lower lip

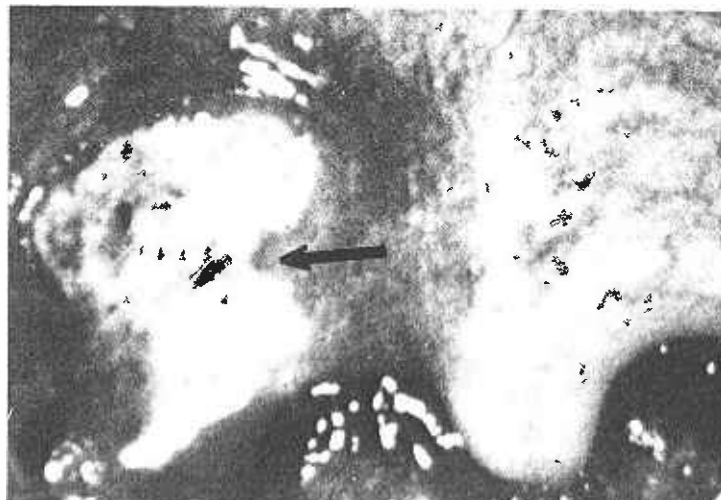


Figure 2: Major ulcer in soft palate

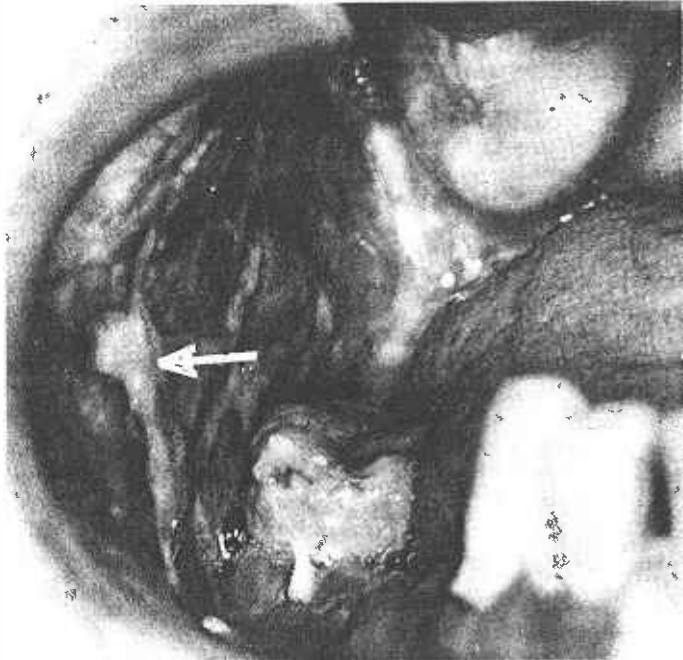


Figure 3: Large recurrent ulcer of cheek mucosa



Figure 4: Multiple ulcers of herpetiform type

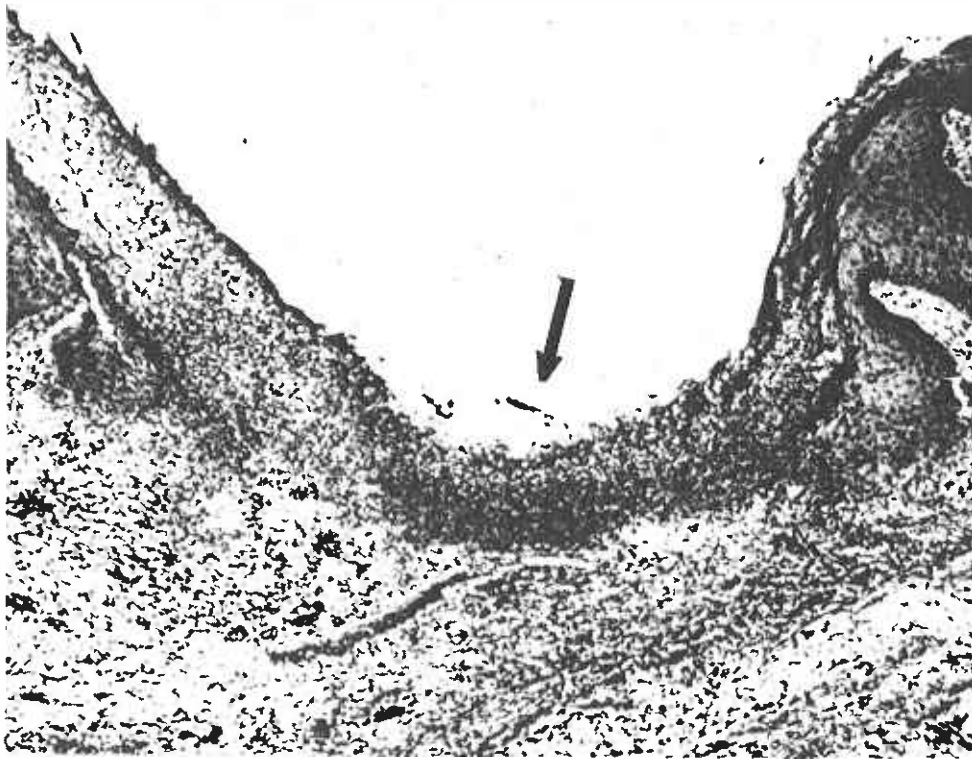


Figure 5: Microscopic appearance of an aphthous ulcer

#### PREDISPOSING FACTORS

In recurrent aphthous stomatitis, *in vitro* immunological changes have been reported. But there is no evidence for an auto immune basis, no association with typical auto immune disease and none of the autoantibodies were found. Some workers believe that it is an abnormal immunological reaction to antigens of the oral bacteria particularly streptococcus sanguis 2A. *S. sanguis* has antigens that may cross react with oral mucosa (1). There are increases in the lymphoproliferative response and in lymphokine production to *S. sanguis* in patients with recurrent aphthous ulceration. Other workers consider that the operation of at least one of a number of precipitating factors is essential for the precipitation of this condition. These factors include hereditary, deficiency states, trauma, hormonal imbalance and psychological factors. Rowe and Rowe claim that food allergy is a common cause of aphthous ulcer and that they have successfully treated this condition for many years by isolation of dietary allergens through the use of elimination diets (2). Miller et al demonstrated in their study that the prevalence of recurrent ulcers was significantly affected not only by the family history but that a marked difference in prevalence also existed between pre school and school children lending support to the concept that while a genetic component or susceptibility is active other factors perhaps microbial or dietary are necessary for the clinical expression of the disease (3).

In clinical practice, studies using biopsies of oral mucosa have shown that IgM, IgG, C3 and C4 may be demonstrated in the cytoplasm of the cells of stratum spinosum (4) and IgG with C3 in the basement membrane zone which is suggestive of an immune response directed against these tissues or the deposition of immune complexes. Another interesting observation is the fact that the oral ulceration is seen in patients with some severe granulocytopathies such as

leukaemia and agranulocytosis although ulcerations in these groups are not always typical of aphthous ulceration. Trauma of minor degree like injection, sharp food and tooth brushing are quoted as example of precipitating factors although there is no convincing evidence to show the direct relationship between the two. Deficiency states like vitamin B, folic acid and iron deficiency have been observed in a small percentage of patients with recurrent ulcers. In one study, approximately sixty per cent of deficient patients with recurrent oral ulceration responded to correction of their deficiency states (5). But some other studies have failed to identify a haematological deficiency state in a significant proportion of patients with ulcers (6).

#### MANAGEMENT

In arriving at a diagnosis of recurrent aphthous ulcer, it is advisable to carry out the following procedures. Detailed history both medical and dental is essential and this should include information such as age of onset, site, duration, frequency, possible relationship to other medical states, trauma, allergic states, foods, menstruation, and psychological stress. Intra oral examination is carried out with emphasis on inspection to elucidate number, size, site, and appearance. The rest of the body is examined for the presence of skin lesions. The characteristic features of a typical lesion of aphthous ulcer are the presence of round recurring ulcer confined to oral mucosa that heal spontaneously with no other signs and symptoms. Ulcers caused by viruses are multiple without tendency for recurrence while neoplastic and infective ulcers are usually single and persistent. Once the examiner is satisfied with the diagnosis, the patient should be told the nature of the condition. Detailed explanation regarding the benign, nature of the ulcer and that it will heal on its own within a limited period of time will help in alleviating the anxiety. Reassurance is essential and it should be made known that palliative therapy is possible.

Dental surgeons can help their medical colleagues in the management of these cases by identifying and eliminating local precipitating factors. Elimination of sharp edge of restorations or appliances together with change of tooth brushing habits and change from hard food to soft food with the basic aim of eliminating trauma as a precipitating factor is recommended. In a hospital environment, it is possible for the clinician to screen the patient for possible deficiency states. Haematological screening in these cases can be focussed on estimation of serum folate, red cell folate, and serum B levels even in the face of an apparently normal peripheral blood film<sup>12</sup> (7). Other factors like diet, allergy and psychological stress can be investigated with the help of practitioners experienced in management of such problems.

At the first visit, the patient can be prescribed an antibiotic mouthwash. Topical tetracycline in the form of a solution can be used. Chlorhexidine (1 per cent aqueous) in the form of a mouth bath is very helpful in these situations. In very painful stages where large ulcers with systemic involvement is seen, it is advisable to combine tetracycline with nystatin and use it topically in the form of a mouth bath. In some practices, favourable reports emerge following use of topical steroids and they even report reduction in duration of ulceration. Hydrocortisone hemisuccinate (corlan) 2.5 mg. is effective if allowed to dissolve slowly in the mouth. Kenalog in orobase is an ointment that adheres to the oral mucosa and some patients seem to like this medicament better than the mouth wash. It can be used three to four times daily. Preparations in the form of spray can be of help when there is extensive ulceration. Other drugs in use for symptomatic relief in major ulceration include cromoglycic acid in the form of a lozenge, thalidomide and dapsone. Systemic steroid therapy in consultation with the patients physician is advisable in a certain percentage of cases where no response is seen to local therapy.

#### SUMMARY

Recurrent ulcers of the mouth of the aphthous type is

a fairly common disorder of oral mucous membrane seen by medical and dental practitioners. Clinicians often arrive at a diagnosis with the help of a medical and dental history, appearance and the pattern of recurrence. Exclusion of other types of ulceration of known aetiology is an important part of the exercise. Aetiology of recurrent aphthous ulcer is not known and treatment remains symptomatic. Where predisposing and precipitating factors can be identified, every attempt should be made to eliminate them. The attitude of the practitioner in describing the situation to the patient with reassurance helps in alleviation of anxiety and suffering.

#### ACKNOWLEDGEMENT

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