

# THE PREVALENCE OF BENIGN ORAL ULCERATION AMONG PATIENTS ATTENDING A DENTAL CLINIC IN KOMFO ANOKYE TEACHING HOSPITAL

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## SUMMARY

A survey to determine the occurrence of oral ulcerations was carried out among dental patients attending the Komfo Anokye Teaching Hospital over a five-month period. Out of a total of 1,022 patients, 20 had oral ulceration, giving an overall prevalence of 1.96%. Of the patients examined 526 were female and 496 were male. Among the female, 2.6% had oral ulceration as compared with 1.2% of males. Three types of ulcers were observed: acute necrotising ulcerative gingivitis (ANUG) (1.08%), chemical ulceration (0.68%), and minor aphthous ulcers (0.2%).

In all cases, there was predominance of females. It is difficult to explain this finding and it is suggested that more work be carried out using larger samples. In the case of ANUG, it was observed that most patients were between one and five years of age. In this age group the prevalence was about 9.6%. Medication, topically applied to the oral mucosa was the usual cause of chemically induced ulcers.

**Keywords:** Acute necrotising ulcerative gingivitis, aphthous ulcers, chemical ulceration.

## INTRODUCTION

Levine (1983)<sup>1</sup> describes ulceration as a range of pathologically discrete entities, which from the clinical aspect can best be grouped as non-recurrent and recurrent conditions. Scully and Porter (1998)<sup>2</sup> use the term ulcer to describe where there is damage to both epithelium and lamina propria while the term erosion is used to describe damage which is somewhat superficial.

Most ulcerations are due to local causes such as trauma and burns. Some are caused by aphthae or malignant neoplasia and a few have aetiology in obvious systemic disease<sup>2</sup>. Ulcer due to systemic

disease include disorders of the blood, gastrointestinal disorders, skin disease e.g. lichen planus<sup>3</sup>, connective tissue disease and infections. Type E.M. et al<sup>4</sup> reported three cases of primary tuberculosis of the tongue.

Unfortunately in our environment, data on the common types of oral ulceration are difficult to come by. The aim of this paper is to describe the types of oral ulceration commonly seen in daily work as a basis of formulating policy and instituting the right treatment modes and advice.

## METHODS

Consecutive new patients who presented at the main dental clinical at Komfo Anokye Teaching Hospital (KATH) over a five-month period with various complaints were surveyed. All patients with oral ulcers suspected to be malignant on clinical grounds were excluded.

The classification of type of oral ulceration was made on purely clinical grounds. These included patient complaints, site and size of ulcer, the presence or absence of pyrexia, halitosis and lymphadenitis. The age and sex of patients were also recorded. All the patients were reviewed after 10 days of treatment.

## RESULTS

A total of 1,022 new patients were seen during the study period. Twenty of them had oral ulcers considered benign clinically; giving a prevalence of 1.96%. The types of ulceration seen were acute necrotising ulcerative gingivitis (ANUG), chemical induced ulcers and minor aphthous ulcers. The distribution is shown in Tables 1 and 2.

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**Table 1** Distribution of oral ulcers by sex

Type of ulcer	No of patients (%)	No of males (n=496)	No of females (n=526)
ANUG	11(1.08%)	3(0.6%)	8(1.52%)
Chemical	7(0.68%)	3(0.6%)	4(0.76%)
Minor aphthous	2(0.2%)	0	2(0.38%)
All ulcers	20(1.96%)	6(1.2%)	14(2.6%)

Treatment of ANUG is with Metronidazole 200mg three times daily for 5 days. Scaling and polishing should follow the acute phase of the condition. An antiseptic mouthwash with a chlorhexidine base may be included in the treatment.

The second most common form of oral ulceration observed was due to chemical trauma (Table 1). The reason is not difficult to find. In our communities a lot of patients apply various remedies topi-

**Table 2** Distribution of ulcers according to age

Types of ulcers	Age group				Total N=1,022
	0-5 years N=52	6-17 years N=118	18-60years N=823	>60 years N=29	
ANUG	5(9.6%)	2(1.7%)	3(0.36%)	1(3.4%)	11(1.08%)
Chemical	-	1(0.85%)	6(0.73%)	-	7(0.68%)
Aphthous	-	-	2(0.24%)	-	2(0.2%)
All ulcers	5(9.6%)	3(2.6%)	11(1.33%)	1(3.4%)	20(1.96%)

## DISCUSSION

Three main types of benign ulcers were observed among the study patients. The most common form was acute necrotising ulcerative gingivitis (ANUG).

In western countries, this condition tends to affect patients in the second and third decades of life<sup>5</sup>. However in the third world, the disease is much more common in children between the age of 1-5 years. This is supported by the results of this study, where among the age group 0-5, the prevalence of the disease was 9.6% (Table 2).

In the western world, the incidence is roughly equal in males and females<sup>5</sup>. This did not seem to be the case as females outnumbered males. It is difficult to explain this finding and more work using larger samples is suggested.

The main aetiological factor in the disease is considered to be a fuso-spirochaetal infection of gingival tissue though *Bacteriodes melaninogenicus*<sup>6</sup> has been implicated

Inadequate oral hygiene, smoking, mental or physical stress, impaired host immune mechanisms as in diabetes, leukaemia<sup>7</sup> and AIDS<sup>8,9</sup> are also considered to be of aetiological importance<sup>5</sup>. In Africa, in conjunction with nutritional deprivation, necrosis of alveolar bone can extend beyond the gingivae into a condition known as noma or cancrum oris<sup>8</sup>.

cally for toothache. These range from acid in car batteries, Aspirin or Aspirin-containing analgesic preparations to a concoction of coconut fibre juice and saltpetre. In all these cases, the lesions were severe and more than 5mm in diameter, and were adjacent to a diseased tooth. More females than males were affected (Table 1). A lot of Public Health advice is needed to stop this practice.

The third type of ulceration observed was minor aphthous ulcers. The aetiology of this form of ulceration remains obscure despite considerable research. Suggestions include viral infection, although none has been identified with certainty and autoimmunity to an L-form of alpha-haemolytic streptococci. It is believed that apart from an intrinsic aetiological factor, which appears to predispose 10%-30% of the population, there are certain precipitating factors which trigger attacks. These include trauma and endocrine disturbances in women with the incidence being highest in the premenstrual period<sup>1</sup>. It is interesting to note that two females were observed both of whom were about three (3) months pregnant. Other factors are psychological stress, certain foods, chemicals and drugs. Cohen et al 1999 described two patients with recalcitrant oral ulcers caused by calcium channel blockers<sup>10</sup>.

Aphthous ulceration is most prevalent between ten and thirty years of age and may persist for many years<sup>1</sup>. The lesions usually resolve after about 10-14 days. Relief is given by applying 0.1% triamci-

nolone acetamide dental paste thrice a day on the lesions.

## CONCLUSION

Only 20 out of 1,022 patients seen at a dental clinic at KATH over a five-month period had oral ulceration. Those affected were mostly females and children aged between 1-5 years.

The commonest type of ulcer seen was acute necrotising ulcerative gingivitis mostly in children and this is believed to be due to childhood malnutrition. Chemical trauma due to local application of conventional and herbal preparations to the gum for the relief of toothache accounted for a significant number of oral ulcers seen. This practice could be harmful and ought to be discouraged through public health education.

A larger study perhaps over a longer period of time is needed to further clarify these findings.

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