



**AWARENESS OF ORAL ULCERS AND SYSTEMIC DISEASE AND THEIR RELATIONSHIP AMONG DENTIST- A CROSS SECTIONAL SURVEY**

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**ABSTRACT**

**Background:** Oral ulceration is a common complaint of patients attending out-patient clinics. Mucosal ulceration may be directly related to or confounded by underlying systemic diseases. Frequent appearance of painful ulcers may be the only manifestation of many underlying systemic problems. When dentists encounter these features they should enquire about other clinical symptoms, associated disorders and family history. In suspected cases patient should be advised to obtain a physician or dermatologist or a gastroenterologist consultation. Dentist can play an important role in identifying people who may have unrecognised systemic diseases. Appropriate referral and timely diagnosis can help prevent serious complications of systemic diseases.

**Aim:** To assess the awareness of dentists about oral ulcers and the relation of oral ulcers with systemic diseases.

**Materials and Methods:** A printed and validated questionnaire containing 9 questions were given to a sample of 200 dentists who were active dental practitioners including both undergraduates and post graduates of different specialities. The responses were collected and analysed.

**Results:** 100% responses were obtained. Awareness among post graduate dentists were found to be more than under graduate dentists. There was no significant differences between male and female dentists though work experience showed a linear relationship with awareness level.

**Conclusion:** Our survey shows the awareness among dentists on the relationship of oral ulcers with systemic diseases seems to be inadequate. Greater emphasis should be given to this scenario by conducting continued dental education programmes so that the dentists are updated with in depth knowledge in systemic diseases.

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**INTRODUCTION**

Oral cavity acts as a mirror which reflects the body's internal conditions. Many systemic diseases tend to show oral manifestations. In some other systemic diseases oral manifestation may be the only initial sign. A thorough knowledge on the relationship of oral manifestation of systemic disease is essential for dentists as they may be the first one to diagnose those conditions. Oral ulcer is a common lesion seen among adolescents and young adults. It is also the most common presentation in day to day practice.<sup>1</sup> It is usually seen as a recurrent lesion associated with pain and discomfort and varies in size, shape and number. The etiology may be local or systemic or multifactorial with numerous risk factors. The ulcers may be superficial limited to the epithelium or deep involving and extending upto lamina propria and perisoteum.

Many of the ulcers of oral cavity may signify an underlying systemic disease. They either occur simultaneously or after the cutaneous lesions have manifested. Thus adequate history taking is mandatory including age of the patient, onset, duration and nature of the ulcers, frequency of occurrence, difficulties and associated symptoms. Medical history also plays a major role in this context. Many patients with recurrent oral ulceration are in good health but some may have pre-existing medical problems which may be of relevance. These may include haematological disturbances, gastroenterological disturbances, auto immune diseases, dermatological diseases, drug induced lesions and sometimes associated with malignancy.<sup>2</sup>

All ulcer responds promptly to symptomatic treatment. It is mandatory for dentists to have a thorough scientific knowledge so as to identify and differentiate ulcers affecting the oral and perioral structures. Awareness of risk factors of oral ulcers will help dentist in prompt diagnosis, necessary treatment and appropriate referrals which are

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crucial in the treatment and management of patient presenting with oral ulcers.

#### **Aim**

- To assess the awareness of dentists about the relationship between oral ulcers and systemic diseases.

#### **Objective**

- To assess awareness about systemic diseases among dentists
- Evaluate their attitude towards correlating systemic diseases with oral ulcers

## **MATERIALS AND METHODS**

This cross section study was conducted on a total of 200 general dental practitioners (GDP). We obtained ethical clearance from the Institutional Ethical committee and the sample size was selected using purposive sampling method. The study group of GDP's comprised of both undergraduates and post graduates with a minimum practice of one year. A well structured descriptive questionnaire comprising of closed- ended questions was distributed to the study group. The questionnaire comprised of two sections first section providing basic demographic information, history taking and details of ulcers whereas the second part of questions were aimed at assessing their awareness about various treatment modalities and most commonly encountered ulcers in their practice. The GDP's participating in this survey was randomly selected, questionnaires distributed among them and responses were personally collected on the same day. The variables used for the statistical analysis was age and years of dental practice. Age variable was divided into 3 categories: < 30 years, 31 to 40 years, and over 40 years. Variable of dental practice was divided into <5yrs, 5-10yrs and >10yrs. We assigned a numerical score of 1 for every positive answer and a numerical score of 0 for every negative or blank answer. These numerical scores were entered into excel sheet and was statistically represented as cumulative percentage.

## **RESULTS**

There was an overwhelming 100% participation of GDP's in our current study. In our study the participants ranged between 24-53yrs of which more than 50% of the GDP's were <30yrs. Our study group comprised of 63% females and remaining 37% males, 65% of the GDP's were undergraduates and 35% were postgraduates. Out of 200 GDP's 68% had a clinical practice of <5yrs, 23% with 5-10yrs clinical practice whereas only 9% were into clinical practice >10yrs. 90% of the practitioners had encountered patients presenting with oral ulcers as their chief complaint and 77% of them conducted a full mouth examination for oral ulcers. 74% of the practitioners recalled their patients for a follow up after 2-3 weeks. 50% of practitioners suspected an underlying systemic disease when dealing with oral ulcers whereas 50% did not. GDP's when dealing with oral ulcers recorded a detailed history comprising of numerous questions out of which the most commonly asked question by 97% of GDP's was duration and the least commonly asked question 27% was association of oral ulcers to bleeding disorders. However, though 97% insisted on

knowing the duration of ulcers verbally only 5.5% documented it. The clinical examination of ulcers was almost thoroughly followed by our study group we noted that 94% of them placed emphasis on site of ulcer followed by size 82%, number 78%, colour of ulcer 62%, border 44% and depth of ulcer 37%. GDP's of the present study were aware of various treatment modalities for ulcers. Symptomatic treatment with mouth wash and gels was frequently advised by 68.5% of GDP's and drugs were advised by 32.5% of them. Along with symptomatic treatment 41.5% of the practitioners preferred to advise routine blood investigation, 28% referred to medical specialist and only 15% of the practitioners preferred biopsy of oral ulcers. The etiology of oral ulcers most commonly encountered by GDP's were 69% psychosomatic, 65% local (dental) factors, gastrointestinal 21.5%, 20% drug induced, immunological 12.5%, 7.5% hematological, 7% mucocutaneous, infectious 18% and 6% malignancies.

## **DISCUSSION**

The term ulcer is derived from Latin word "ulcus" which means "sore". It is defined as a "break in the skin or mucous membrane with loss of surface tissue and the disintegration and necrosis of epithelial tissue".<sup>3</sup> Oral ulcers are the most common lesions in any given dental practice and its worldwide prevalence is 4%. It is highly symptomatic which necessitates immediate relief. The discontinuous epithelium is usually surrounded by an erythematous zone and the surface is covered by fibrin slough, appearing yellow or white lesion. Among the varied etiologies proposed for oral ulcers its association with underlying systemic disease should never be overlooked. The common presentation of oral ulcers in practice is positively reflected in our current study. However we observed that specialist who attended to only referral cases or who treat only their speciality patients may not encounter oral ulcers as commonly as other practitioners.

The clinical presentation of ulcers needs to be emphasized in terms of number, size, site, depth and borders as they may give clue to the underlying pathology.<sup>4</sup> Almost 3/4<sup>th</sup> of GDP's recalled their patients with oral ulcers after 2-3 weeks. It is a golden rule that any ulcer which does not heal with or without treatment for more than 3 weeks should be biopsied to rule out malignancy. There was an equivocal response among the practitioners regarding correlation of oral ulcers with an underlying systemic disease. This may be due to the fact that the most common oral ulcers are usually associated with local factors and stress.<sup>3,4</sup>

For obtaining more details about ulcers practitioners recorded history which included number, location, duration, chronicity, drug reactions, gastrointestinal disturbances, food allergies, association of ulcers with fever and halitosis, inability to masticate and open mouth, simultaneous or concurrent occurrence of oral ulcers with ulcers elsewhere in the body and abnormal bleeding tendencies. Interestingly we noted that though relevant history findings were enquired there was a failure to register them in documents. We emphasize here that documentation is an essential part of practice for future references as well as from medicolegal aspect.

Though all GDP's examined the oral cavity thoroughly for oral ulcers it was mainly centered around the site, size, number and colour whereas other valuable findings like border and depth of ulcer was not given much importance. Talacko *et al* and Richa *et al* have suggested that it would be ideal to include extra oral examination along with intra oral examination as it may reveal the overall general condition including nutritional status for example conjunctival pallor may help in identifying anaemic patients and presence of ulcers on skin may indicate mucocutaneous lesions. The regional lymph nodes should be palpated because they may be enlarged in the case of persistent or large ulcers.<sup>5,6</sup>

As the etiology of oral ulcers is varied the treatment approach should also be diverse. It should be aimed at treating the underlying systemic diseases whenever relevant to ensure cure. Most ulcers are treated symptomatically by using local measures like therapeutic gels, mouth washes and systemic medication when needed.

Further investigations will aid in delineating the underlying pathology and will include hematological as well as special investigations. An integral part of treatment of oral ulcers ideally would be backed by investigations and referral to a medical specialist for further management.<sup>5,7</sup>

However, we accentuate on the fact that among the varied etiologies of oral ulcers the most common etiology is physical trauma caused by toothbrush injury, sharp edges of tooth and dental appliances till date.<sup>8</sup>

In our current study we found that the awareness of oral ulcers among GDP's was found to be positive among both undergraduates and post graduates. The years of clinical practice also plays a major role as it increases the exposure of practioners to variety of clinical presentation and etiologies. We however observed a short coming among GDP's while advising a biopsy of ulcers or referring them to medical specialists. Through documentation of history and clinical findings of ulcers will be helpful not only in future reviews but also during secondary referral to a specialist.

## CONCLUSION

Our survey shows the awareness among dentists on the relationship of oral ulcers with systemic diseases seems to be inadequate in few areas. Greater emphasis should be given to this scenario by conducting continued dental education programs so that the dentists are updated with in depth knowledge in systemic diseases. Awareness of systemic diseases among dentists emphasizes the need for training dental practitioners to have in-depth knowledge about the relationship of oral ulcers to systemic disease, so as to provide proper diagnosis and management.

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