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Prevalence Of Various Types Of Ras In Patient Attending A Private Dental Institute

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ABSTRACT:

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INTRODUCTION

Aphthous ulcers are common inflammatory lesions of the oral mucosa characterized by pain and discomfort. These lesions frequently occur in association with various systemic conditions such as inflammatory bowel disease, celiac disease, malabsorption syndromes, Behçet's disease, HIV infection, Sweet's syndrome, and MAGIC syndrome. The word aphthous originates from the Greek term meaning "ulcer." Clinically, these lesions are referred to as recurrent aphthous stomatitis (RAS) and are considered benign in nature.

Aphthous ulcers are classified into three clinical variants: minor, major, and herpetiform aphthae. Minor aphthous ulcers are the most frequently observed type, accounting for approximately 70–85% of reported cases. Herpetiform aphthous ulcers are relatively uncommon, representing about 5–10% of cases, and present as multiple small ulcers occurring in clusters.

The etiology of aphthous ulcers is largely idiopathic, although several predisposing factors have been identified. These include emotional and psychological stress, allergic reactions, exposure to toxic agents, nutritional deficiencies, hormonal imbalance, and gastrointestinal disorders. Vitamin deficiencies have been frequently implicated in affected individuals. The lesions are generally self-limiting and tend to heal spontaneously within a few days. Aphthous ulcers are more commonly observed in non-smokers and appear less frequently in individuals with good oral hygiene. Several studies suggest a higher prevalence among females. The condition typically begins in childhood or early adulthood, with peak incidence during the second and third decades of life, and is less commonly seen in older individuals.

Early diagnosis facilitates effective symptomatic management and prevents progression to more severe forms. Diagnosis is primarily clinical, and laboratory investigations are usually unnecessary unless the presentation is atypical. Differential diagnosis includes oral malignancies, herpes simplex infection, and drug-induced oral lesions.

Management of recurrent aphthous stomatitis is generally straightforward; however, frequent recurrence can significantly impact quality of life. Owing to the unclear etiopathogenesis, prevention of recurrence remains challenging. Treatment modalities commonly include topical anti-inflammatory agents such as non-steroidal anti-inflammatory drugs, corticosteroids, and mouth rinses containing triclosan and zinc sulfate. Additional therapeutic options such as topical hydrogen peroxide, silver nitrate application, and laser therapy using CO_2 or Nd:YAG lasers have demonstrated effectiveness in providing pain relief in severe cases. Nutritional supplementation and dietary modifications, including avoidance of spicy and oily foods and increased intake of fruits and vegetables, are often recommended.

Previous research by our team has included in vitro studies, reviews, case reports, surveys, microscopic analyses, and clinical trials. The present focus is on epidemiological evaluation. The aim of this study was to assess the incidence of aphthous ulcers among patients attending a private dental institution, thereby providing updated epidemiological insights that may aid in improved disease management

MATERIALS AND METHODS

Study Setting

A retrospective study was conducted in a private dental institution. Patient case records were reviewed by a trained examiner to obtain relevant information. Conducting the study in an institutional setting allowed easy access to patient data. A total of 1000 patient records were reviewed, covering a wide age range.

Inclusion Criteria

1. Patients diagnosed with aphthous ulcers or recurrent aphthous stomatitis
2. Patients aged below 20 years to 80 years

Exclusion Criteria

1) Incomplete or missing patient records
2) Duplicate patient entries
3) Patients with aphthous ulcers associated with other oral mucosal lesions
4) Atypical presentations of aphthous ulcers

Sampling Method

Convenient sampling was employed. A total of 1000 patient case records were screened to determine the incidence of aphthous ulcers. Clinical findings were cross-verified using photographic records to ensure accuracy.

Data Collection

After eliminating duplicate and incomplete records, the data were systematically entered into a Microsoft Excel spreadsheet. Variables recorded included age, gender, and presence of aphthous ulcers. Age and gender were considered independent variables, while aphthous ulcer presence was treated as the dependent variable.

Statistical Analysis

Statistical analysis was performed using SPSS software version 23.0. The collected data were transferred from Excel to SPSS for analysis. Chi-square tests were applied to assess associations between variables. A p-value of less than 0.05 was considered statistically significant. Results were represented graphically for clearer interpretation.

Figure 1. Shows the distribution of aphthous ulcer in patients from the study. Red colour represents the presence of aphthous ulcers (5.4%), orange colour represents the absence of apthous ulcer (94.6%). The figure shows only a small fraction of the patients were suffering from aphthous ulcers.

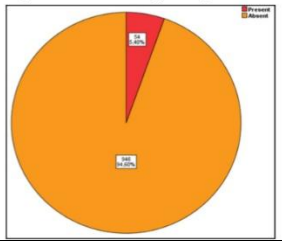


Figure 3. Shows the association of age and presence (red) and absence (orange) aphthous ulcer. X-axis represents the various age groups. Y-axis represents the number of patients. Chi square analysis shows the association between age and aphthous ulcer were statistically significant (p value= 0.000; p < 0.05). The lesions occurred more in the 21 - 40 age group followed by < 20 age group. This shows the lesions were more prevalent in the younger age groups.

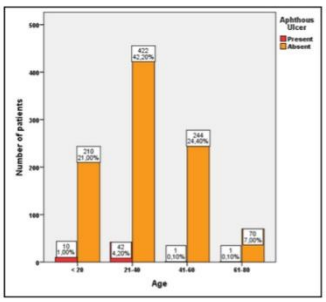
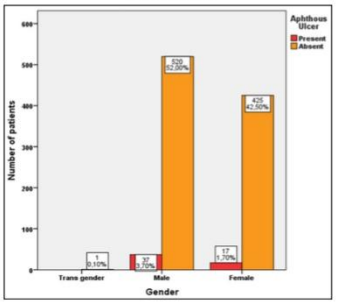


Figure 2. Shows the association between gender and presence (red) and absence (orange) aphthous ulcer. X-axis represents the gender; Y-axis represents the number of patients. Chi square analysis shows the association between gender and aphthous ulcer were not statistically significant (p value= 0.147; p > 0.05) yet the figure shows a male predilection for aphthous ulcers (3.7%).



RESULTS AND DISCUSSION

Among patients diagnosed with aphthous ulcers, a higher prevalence was observed in males compared to females. Of the affected individuals, 3.7% were males and 1.7% were females. Chi-square analysis revealed no statistically significant association between gender and aphthous ulcer occurrence ($p = 0.147$; $p > 0.05$). Similar findings have been reported in earlier studies, although variations in gender predilection exist across different populations. While some studies indicate female predominance due to hormonal and stress-related factors, others report no clear gender bias.

Aphthous ulcers were observed across all age groups; however, the highest prevalence was noted among individuals aged 21–40 years (4.2%), followed by those below 20 years of age (1%). Statistical analysis demonstrated a significant association between age and aphthous ulcer occurrence ($p = 0.000$; $p < 0.05$). These findings are consistent with previous studies reporting increased prevalence in younger individuals, particularly during the second and third decades of life.

The limitations of the present study include a relatively small sample size and reliance on clinical diagnosis, which may introduce observer bias. Future studies should incorporate larger sample sizes, prospective study designs, and assessment of additional contributing factors such as stress, nutritional status, adverse habits, and types of aphthous ulcers.

CONCLUSION

The present study revealed a comparatively lower incidence of aphthous ulcers than reported in similar studies. Although no statistically significant association was found between gender and aphthous ulcer occurrence, a male predominance was observed. The most commonly affected age group was 21–40 years, followed by individuals below 20 years of age, with a significant association between age and aphthous ulcers. Factors such as stress and adverse habits may play an important role in the etiology of aphthous ulcers. Understanding epidemiological patterns can assist in early diagnosis and improved clinical management of the condition.

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