

PREVALENCE OF ORAL MUCOSAL LESIONS IN CHILDREN FROM 0 TO 12 YEARS OLD

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Abstract

Background: To assess the prevalence of Oral mucosal lesions in children from 0 to 12 years old.

Materials & methods: This study involved retrospective evaluation of clinical data records and charts. Evaluation of data records of all the paediatric subjects with oral soft tissue abnormalities was done. A Performa was made and complete demographic and clinical details of all the subjects were separately recorded. Pathologic diagnosis was recorded separately. Other relevant details included evaluation of chief symptoms, history of current illness, medical history and dental history.

Results: Oral mucosal lesions were present in 7.3 percent of the patients. Among the patients with oral mucosal lesions, geographic tongue, bifid tongue, fissured tongue, primary herpetic gingivostomatitis, candidiasis and oral warts were seen in 1.75 percent, 0.58 percent, 0.88 percent, 0.44 percent, 2.63 percent and 0.58 percent of the patients respectively.

Conclusion: Oral mucosal lesions, chiefly candidiasis, most frequently affect children of up to 12 years of age group.

Key words: Oral Lesions, Children

INTRODUCTION

Oral mucosal lesions (OMLs) are a group of conditions that occur on the surface of the oral mucosa and present a variety of lesions. These lesions can impair the activities of chewing, swallowing and speaking. The discomfort caused by OMLs requires extra attention, especially in children. Impairment and discomfort, along with possible psychological problems, might consequently distract children and lead to poor academic performance.^{1, 2}The clinical examination to obtain a diagnosis of oral conditions and lesions is fundamental, so that it must be correct, thorough, and systematic. The exam of soft tissues in pediatric patients involves knowledge of normal size, shape, color, and texture of the structures that comprise it. The correct exploration of the oral mucosa can provide important tools in diagnosing developmental, neoplastic, infectious or inflammatory alterations.^{3, 4}

Current researches mainly focused on a single lesion or include lesions in a single anatomical area. Moreover there are even fewer studies in pediatric population about oral mucosal lesions. Despite World Health Organization's (WHO) reports supporting epidemiological studies, there is little number of researches about oral mucosal lesions and these have many problems about ensuring standardization. There are some differences in

diagnostic criteria and methodology of these studies. Moreover, the differences in geographic region where the study was conducted and racial differences may also affect the results.⁴ Hence; the present study was undertaken for assessing the prevalence of Oral mucosal lesions in children from 0 to 12 years old.

MATERIALS & METHODS

The present study was undertaken for assessing the prevalence of Oral mucosal lesions in children from 0 to 12 years old. This study involved retrospective evaluation of clinical data records and charts. Evaluation of data records of all the paediatric subjects with oral soft tissue abnormalities was done. A Performa was made and complete demographic and clinical details of all the subjects was separately recorded. Pathologic diagnosis was recorded separately. Other relevant details included evaluation of chief symptoms, history of current illness, medical history and dental history. All the results were recorded and analysed using SPSS software. Univariate analysis was used for evaluation of level of significance.

RESULTS

In the present study, out of 685 patients, oral mucosal lesions were present in 7.3 percent of the patients. Among the patients with oral mucosal lesions, geographic tongue, bifid tongue, fissured tongue, primary herpetic gingivostomatitis, candidiasis and oral warts were seen in 1.75 percent, 0.58 percent, 0.88 percent, 0.44 percent, 2.63 percent and 0.58 percent of the patients respectively.

Table 1: Prevalence of oral mucosal lesions

| Oral mucosal lesions | Number | Percentage |
|----------------------|--------|------------|
| Absent | 635 | 92.7 |
| Present | 50 | 7.3 |
| Total | 685 | 100 |

Table 2: Spectrum of oral mucosal lesions

| Oral mucosal lesions | Number | Percentage |
|------------------------------------|--------|------------|
| Geographic tongue | 12 | 1.75 |
| Bifid tongue | 4 | 0.58 |
| Fissured tongue | 6 | 0.88 |
| Primary herpetic gingivostomatitis | 3 | 0.44 |
| Candidiasis | 18 | 2.63 |
| Oral warts | 4 | 0.58 |
| Others | 3 | 0.44 |

DISCUSSION

The oral cavity is considered as a mirror of general health. The tongue lesions such as fissured tongue, geographic tongue, median rhomboid glossitis and other oral mucosal lesions like Fordyce's spots and leukedema are classically considered as developmental lesions and normal conditions rather than having virtual disease characteristics. These lesions may be present at birth or become evident later in life. Mucosal lesions may be discovered during routine dental examinations and vary depending on age, gender and /or race. Majority of oral diseases are due to oral tissues, but numerous underlying systemic conditions may manifest with signs and symptoms within the oral cavity.^{6- 9}Hence; the present study was undertaken for assessing the prevalence of Oral mucosal lesions in children from 0 to 12 years old.

In the present study, out of 685 patients, oral mucosal lesions were present in 7.3 percent of the patients. In a study conducted by Majorana A et al, the frequency of children presenting oral mucosal lesions was 28.9%, and no differences related to gender were observed. Bessa CF et al, in another study reported the frequency of children presenting alterations was 27.0%, and it was higher in older children.^{10, 11}

In the present study, among the patients with oral mucosal lesions, geographic tongue, bifid tongue, fissured tongue, primary herpetic gingivostomatitis, candidiasis and oral warts were seen in 1.75 percent, 0.58 percent, 0.88 percent, 0.44 percent, 2.63 percent and 0.58 percent of the patients respectively. In a similar study conducted by Majorana A et al, the most frequent lesions recorded were oral candidiasis (28.4%), geographic tongue and other tongue lesions (18.5%), traumatic lesions (17.8%), recurrent aphthous ulcerations (14.8%), herpes simplex virus type 1 infections (9.3%), and erythema multiforme (0.9%). Children suffering from chronic diseases had a higher frequency of oral lesions compared with healthy children. Bessa CF et al, in another study reported the most common lesions to be geographic tongue, cheek biting and melanotic macule. Candidiasis was associated with antibiotic therapy and use of pacifiers. Fissured tongue was associated with congenital anomalies, allergy; age from 5 to 12 years. There was a lack of association of patient's economic status and prevalence of oral mucosal alterations. The frequency of mucosal alterations in children is high and

increases with age, and some of them are associated with habits and medical history of the patients.^{10, 11} Shulman studied 10,030 individuals aged between 2 and 17 years, out of which 914 individuals had 976 lesions. The lip was the most frequent site of lesions (30.70%), followed by the dorsum of the tongue (14.70%) and the buccal mucosa (13.60%). Lesions were more prevalent in males (11.76%) than females (8.67%). The most prevalent lesions were lip/cheek bite (1.89%), followed by aphthous stomatitis (1.64%), recurrent herpes labialis (1.42%) and geographic tongue (1.05%). In a study involving Turkish children, found that excessive melanin pigmentation (6.9%) was the most common lesion in the study population.^{12, 13} Chauhan AS et al determined the prevalence of oral mucosal lesions and normal variants of the oral mucosa in 12–15-year-old school students. A cross-sectional survey was done on 925 school going children of age 12–15 years, selected by multi-stage cluster random sampling. The data collection involved a pre-designed questionnaire to collect demographic information and smoking and smokeless tobacco chewing habits. The study result showed that 154 (16.6%) were diagnosed with at least one mucosal lesion at the time of examination. The prevalence of any oral mucosal lesion was 16.4% among boys and 16.9% among girls, but there were no statistically significant differences in oral mucosal lesion by gender. The prevalence of oral mucosal lesions was found to be statistically significant with tobacco habit. Their study suggested that oral mucosal lesions were diagnosed minimally in adolescents.¹⁴

CONCLUSION

Oral mucosal lesions, chiefly candidiasis, most frequently affect children of up to 12 years of age group.

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