

Original Research

Assessment of prevalence of oral lesions among children of upto 10 years of age: An observational study

¹Zafaerah Sultana, ²Pulivarthi Tharangini, ³Durga Prasad

^{1,3}M.D.S, Dept of Pedodontics, MNR Dental College & Hospital, Fasalwadi, Telangana, India;

²B.D.S, MNR Dental College & Hospital, Fasalwadi, Telangana, India

ABSTRACT:

Background: The present study was conducted for assessing the prevalence of oral lesions among children of upto 10 years of age. **Materials & methods:** A total of 500 children upto the age group of 10 years were analyzed. Complete demographic details of all the children was obtained. Consent was obtained from the parents/guardians of all the subjects for carrying out their oral examination. A master chart was prepared in excel sheet and prevalence and spectrum of oral lesions was recorded. All the results were recorded and analyzed by SPSS software. **Results:** The overall prevalence of oral lesions was 17.2 percent. Out of these 86 children, 46 children were boys while the remaining 40 children were girls. Among these children with presence of oral lesions, the most frequent lesions recorded were oral candidiasis and geographic tongue found to be present in 21 children (24.42 percent) and 18 children (20.93 percent) respectively. Traumatic lesions were seen in 17 children (19.77 percent), while aphthous lesions were seen in 15 children (17.44 percent). Herpes simplex virus infection was found to be present in 15 children (17.44 percent). **Conclusion:** Detection of the lesions is dependent on the knowledge and recognition of lesions by multiple examiners in the pediatric clinic. The present study is useful in providing more information about oral mucosal anomalies and the factors associated with them in children.

Key words: Oral Lesions, Children

Received: 24 October, 2021

Accepted: 27 November, 2021

Corresponding author: Zafaerah Sultana, M.D.S, Dept of Pedodontics, MNR Dental College & Hospital, Fasalwadi, Telangana, India

This article may be cited as: Sultana Z, Tharangini P, Prasad D. Assessment of prevalence of oral lesions among children of upto 10 years of age: An observational study. J Adv Med Dent Scie Res 2021;9(12):129-131.

INTRODUCTION

The prevalence of oral lesions in children is reported to be affecting significant proportion of population; however diagnosis of oral lesions can be challenging, being an unspecific symptom of several diseases. Differential diagnosis can range from classic infectious disease of childhood over nutritional deficiencies, gastrointestinal disorders, and inflammations to side effects of medications or chronic diseases.¹⁻³

There are relatively few reports in the literature regarding oral mucosal conditions in children. The most common oral disease, caries, is studied the most, and cancer therapy-related mucosal disorders are also commonly described. Furthermore, the exact prevalence of oral mucosal lesions in healthy children is controversial due to a lack of standardized methods, different diagnostic criteria, and the description of very few lesions in each survey. The lack of epidemiologic data in this matter may lead to diseases

of the soft tissues of the oral cavity being overlooked. Despite World Health Organization recommendations, the epidemiologic literature about children and adolescents in this field is quite limited. Moreover, the signs and symptoms of oral mucosal disorders in childhood can change with aging and are often different from common adult oral pathologies.⁴⁻⁸ Hence; the present study was conducted for assessing the prevalence of oral lesions among children of upto 10 years of age.

MATERIALS & METHODS

The present study was conducted for assessing the prevalence of oral lesions among children of upto 10 years of age. A total of 500 children upto the age group of 10 years were analyzed. Complete demographic details of all the children was obtained. Consent was obtained from the parents/guardians of all the subjects for carrying out their oral examination. A master chart was prepared in excel sheet and

prevalence and spectrum of oral lesions was recorded. All the results were recorded and analyzed by SPSS software.

RESULTS

A total of 500 children were analyzed. Out of 500, oral lesions were found to be present in 86 children. Hence; the overall prevalence of oral lesions was 17.2 percent. Out of these 86 children, 46 children were boys while the remaining 40 children were girls. Among these children with presence of oral lesions, the most frequent lesions recorded were oral candidiasis and geographic tongue found to be present in 21 children (24.42 percent) and 18 children (20.93 percent) respectively. Traumatic lesions were seen in 17 children (19.77 percent), while aphthous lesions were seen in 15 children (17.44 percent). Herpes simplex virus infection was found to be present in 15 children (17.44 percent).

Table 1: Prevalence of oral lesions

Oral lesions	Number	Percentage
Present	86	17.2
Absent	414	82.8
Total	500	100

Table 2: Spectrum of oral lesions

Oral lesions	Number	Percentage
Oral candidiasis	21	24.42
Geographic tongue	18	20.93
Traumatic lesions	17	19.77
Aphthous lesions	15	17.44
Herpes simplex virus infection	15	17.44
Total	86	100

DISCUSSION

Oral lesions in children encompass a wide range of etiologies, including idiopathic entities as well as those related to an underlying systemic illness. In addition, oral masses include benign entities harboring locally destructive behavior and even malignancies in rare cases. Thorough patient history and detailed and efficient physical examination are critical for determining which lesions can be closely observed versus those require further diagnostic work-up. Understanding normal oral cavity anatomy is crucial for performing appropriate evaluation.⁸⁻¹⁰ Hence; the present study was conducted for assessing the prevalence of oral lesions among children of upto 10 years of age.

A total of 500 children were analyzed. Out of 500, oral lesions were found to be present in 86 children. Hence; the overall prevalence of oral lesions was 17.2 percent. Out of these 86 children, 46 children were boys while the remaining 40 children were girls. Among these children with presence of oral lesions, the most frequent lesions recorded were oral candidiasis and geographic tongue found to be present in 21 children (24.42 percent) and 18 children (20.93

percent) respectively. Alessandra Majorana, Elena Bardellini et al assessed the prevalence of oral mucosal lesions in a large group of children. Data collected included age, gender, and pathologic diagnosis. In total, 10,128 children (0-12 years old) were enrolled. Clinical diagnostic criteria proposed by the World Health Organization were followed. The frequency of children presenting oral mucosal lesions was 28.9%, and no differences related to gender were observed. 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 (chi-square: $P < .01$). Mucosal alterations in children are relatively common, and several oral disorders are associated with underlying medical conditions.¹¹ Oral health is the entire health of the teeth, mucosal areas, periodontal tissues and tongue. The concept of oral and dental health is mostly being perceived to be limited to carious teeth and periodontal diseases by both clinicians and academics. Based on this view, diseases of oral mucosal areas are generally ignored by dental practitioners. 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.⁸⁻¹¹

In the present study, traumatic lesions were seen in 17 children (19.77 percent), while aphthous lesions were seen in 15 children (17.44 percent). Herpes simplex virus infection was found to be present in 15 children (17.44 percent). Unur M et al evaluated the prevalence and distribution of oral lesions in Turkish children. A cross-sectional survey was carried out on total of 1041 Turkish children attended by the outpatient Oral Medicine and Surgery Department of İstanbul University. Examinations were performed and 277 of whom had a total of more than 30 different type of lesions detected. The fissured tongue (3.4%) was the most frequent lesion, followed by traumatic lesions (3.2%) and the cheek biting (2.5%).¹²

CONCLUSION

Detection of the lesions is dependent on the knowledge and recognition of lesions by multiple examiners in the pediatric clinic. The present study is useful in providing more information about oral mucosal anomalies and the factors associated with them in children.

REFERENCES

1. Yamagata K, Onizawa K, Yoshida H, Yamagata K, Kojima Y, Koike K, et al. Dental management of pediatric patients undergoing hematopoietic stem cell transplant. *Pediatr Hematol Oncol* 2006;23:541-8.
2. Milog˘lu O, Gregen M, Akg˘l HM, Acemog˘lu H. The prevalence and risk factors associated with benign

- migratory glossitis lesions in 7619 Turkish dental outpatients. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod* 2009;107:29-33.
3. Gebel K, Hornstein OP. Drug-induced erythema multiform: results of a long-term retrospective study. *Dermatologica* 1984; 168:35-40.
 4. Glennly AM, Gibson F, Auld E, Coulson S, Clarkson JE, Craig JV, et al. A survey of current practice with regard to oral care for children being treated for cancer. *Eur J Cancer* 2004;40:1217-24.
 5. Slavkin HC, Baum BJ. Relationship of dental and oral pathology to systemic illness. *JAMA* 2000;284:1215-1217.
 6. Léauté- Labrèze C, Lamireau T, Chawki D, Maleville J, Taïeb A. Diagnosis, classification and management of erythema multiforme and Stevens-Johnson syndrome. *Arch Dis Child* 2000; 83:347-52
 7. Petersen PE, Estupinan-Day S, Ndiaye C. WHO's action for continuous improvement in oral health. *Bull World Health Organ* 2005;83:642.
 8. Kramer IR, Pindborg JJ, Bezroukov V, Infirri JS. Guide to epidemiology and diagnosis of oral mucosal diseases and conditions. World Health Organization. *Community Dent Oral Epidemiol* 1980;8:1-26.
 9. Regezi JA, Sciubba JJ, Jordan RCK, editors. *Ulcerative conditions in oral pathology: clinical pathologic correlations*. 5th ed. St. Louis: Saunders Elsevier; 2008. p. 21-67.
 10. Cameron AC, Widmer RP. Pediatric oral medicine and pathology. In: *Handbook of pediatric dentistry*. 3rd ed. St. Louis, MO: Mosby Elsevier; 2008. p.169-216
 11. Alessandra Majorana , Elena Bardellini et al. Oral mucosal lesions in children from 0 to 12 years old: ten years' experience. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod*. 2010 Jul;110(1):e13-8. doi:
 12. Unur M, Bektas Kayhan K, Altop MS, Boy Metin Z, Keskin Y. The prevalence of oral mucosal lesions in children:a single center study. *J Istanbul Univ Fac Dent*. 2015;49(3):29-38. Published 2015 Oct 21. doi:10.17096/jiufd.03460