

Original Article

The prevalence of oral mucosal lesions in the pediatric population visiting a dental school of Uttar Pradesh: A cross sectional study

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Abstract

Background-Lesions of the oral mucosa are located in the soft tissue of the oral cavity. Most of the studies describe the prevalence of oral mucosal lesions mainly in an adult population and only few reports have been published about pathological lesions of the oral mucosa in pediatric population. **Method**-An observational cross-sectional study was conducted, with non-probability sampling with a sample of 110 patients of 6-12 years age range group and confidence level 95 %. **Result**-We found 30 % children with oral mucosal lesions. The presence of oral mucosal lesions was registered in the clinical records. In 101 patients a prevalence of 37.62 % oral mucosal lesions was observed. **Conclusion**-The most frequent lesion was the minor aphthous ulcer (21.5 %) followed by irritation fibroma (15.7 %), traumatic ulcer (15.7 %), traumatic erosion (10.2 %), impetigo (10.2 %), pigmented lesion, recurrent herpes labialis, intraoral herpes, mucocele and ranula (5.2%).

Keywords: Oral mucosal lesions, Uttar Pradesh, pediatric population, aphthous stomatitis, angular cheilitis.

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INTRODUCTION

Oral mucosal lesions can be identified by their etiology, clinical characteristics, and prognosis. Proper examination of the oral mucosa is helpful in diagnosing developmental, neoplastic, infectious, or inflammatory alterations¹. The oral mucosal lesions in children present as vesicles, ulcers, macules, changes in color, size alterations, and configuration of the oral anatomy. It is important to organize and standardize the criteria of examination for the various medical procedures in oral mucosa. Epidemiological studies help in determining the incidence, prevalence and the severity of diseases. They also help in assessing the distribution, the risk factors and associated aetiology. This information is useful in the formulation of health care programmes at the primary level to spread awareness, help guide in early diagnosis and lead to prompt treatment. Several studies have reported different frequency of oral mucosal lesions in various locations. The most common lesions found in one

study were angular cheilitis (14.7 %), followed by herpes labialis (10.7%), impetigo (9.3%), geographic tongue, recurrent aphthous ulcer, and verruca vulgaris (2.7 %)². The most prevalent lesions found in South Africa was the recurrent aphthous ulcer (10.87%), followed by herpes labialis (5.2%), angular cheilitis (3.54 %), geographic tongue (2.95%), depapillated tongue (2.6 %), ankyloglossia, traumatic ulcer (1.41 %), mucocele (1.18 %) and impetigo (0.94 %)³ while in Mexico the most frequent lesions were: fibrous hyperplasia (3.18 %), oral candidiasis (1.89 %), and ulcerative lesions (1.2 %)⁴. The purpose of this study was to determine the prevalence of oral mucosal lesions in patients visiting Department of Pediatric Dentistry. It will also serve as a baseline for future studies with the goal of finding ways to improve oral health in this region.

MATERIAL AND METHODS

Ethical clearance was taken from Institutional

Ethical committee before the commencement of the study. An observational, descriptive study was conducted. Non-probability sampling was used for convenience depending on scheduling and availability of the patients from the Pediatric Dentistry Department at ITS Dental college, Ghaziabad. A sample of 110 patients from a population of 340 patients treated at the department of pediatric dentistry in the year 2015, with 95 % confidence level, 5 % margin of error gave an estimation of 30 % of pediatric patients with oral mucosal lesions. The samples were distributed into two groups: healthy patients and patients with systemic diseases. The inclusion criteria were patients from 6 to 12 years children of both genders. The sample was examined between July and September in 2015. This study was approved by the college Ethical Committee and before carrying out the clinical trial; an informed written consent was taken. In our study, based on the clinical exam of the oral mucosa, a clinical record was maintained where the general data about children was registered by illnesses, type, and location of the lesion. The oral mucosal lesion was captured using a photograph. The results obtained were processed using Microsoft Office Excel 2011® worksheet and a descriptive statistical analysis was done.

RESULTS

51 pediatric patients were examined in the department of pediatric dentistry from July to September 2015 in which 47.05 % were males and 52.9 % were female. The age group of the patients was from 6 to 12 years of age with a mean of 8.7 years old. Among all the patients, 19 patients (37.6%) were diagnosed with one oral mucosal lesion during the examination. The frequency of oral mucosal lesion observed was 36.2% in males and 38.9 % in females. As observed in Table 1, the most prevalent lesions were minor aphthous ulcers (21.5%), irritation fibroma (15.7%), traumatic ulcer (15.7%), traumatic erosion (10.2 %), impetigo (10.2 %), pigmented lesions, recurrent herpes labialis, herpes, mucocele and ranula (5.2 % each).

DISCUSSION

The prevalence of oral mucosal lesions in this study was 37.2%. The percentage of the lesions found in this study was in accordance with that observed in Argentina (Crivelliet al. (1988)-39.04 %) ⁵ and Spain by (García-Polaet al. (2002) -38.94 %) ⁶.

Table 1- Oral mucosal lesions

Type of lesion	Number of lesions found	%age
Minor aphthous ulcers	4	21.5%
Irritation fibroma	3	15.7%
Traumatic ulcer	3	15.7%
Traumatic erosion	2	10.5%
Impetigo	2	10.5%
Pigmented lesions	1	5.2%
Recurrent herpes labialis	1	5.2%
Recurrent intraoral herpes	1	5.2%
Mucocele	1	5.2%
Ranula	1	5.2%
Total	19	100%

The most prevalent lesions were minor aphthous ulcer (21.5%), irritation fibroma (15.7%), traumatic ulcer (15.7%), traumatic erosion (10.5%), impetigo (10.5 %), pigmented lesions (5.2%), herpes labialis (5.2%), intraoral herpes (5.2 %), mucocele (5.2%) and ranula (5.2 %). No malignant lesions were found in the present study, which confirms the rarity of these lesions in the oral cavity. Even though it is rare, the dental practitioner should remain alert for any suspicious lesion. Non-traumatic white patches, white patches with red areas, chronic non-healing ulcers, indurated lesions are some of the features which would make a lesion suspicious and should be investigated further. Opportunistic screening of high risk individuals will go a long way in detecting oral cancer and precancer at a relatively early stage. For the dentists to fully contribute to improvement of early detection, they must perform thorough examinations. Repeatedly training oneself to scrutinize the entire oral mucosa in a systematic fashion reduces the chance of missing any lesion. ⁷

Since it is cross sectional, it can be used to investigate only associations, not causal relationships. Second, the lesions were identified without assistance of laboratory or histological tests. While trained examiners can be expected to identify many entities (such as aphthous ulcers, nicotinic stomatitis and recurrent herpes labialis) without additional diagnostic aids, others (such as nevus) may have other differential diagnoses and can be diagnosed clinically with less certainty. Furthermore, some lesions (tumors, nonspecific lesions and lesions of unknown etiology) could not be identified at all. Finally, the study may understate the prevalence of mucosal lesions that present as acute problems. For example, people may be more inclined to seek treatment for mucoceles, ranulas (even buccal mucosa fibromas that suffer biting trauma at every meal) and other acute conditions, so these are less likely to be seen in prevalence studies.⁸⁻¹⁰ The diagnosis of these oral mucosal lesions is a challenge for the dentist because of its varied clinical expression. This study demonstrates that patients in Uttar Pradesh population are more prone to developing oral mucosal lesions. Hence, it is prudent to continue this investigation with a more samplesize in Uttar Pradesh which is the limitation of this study. Finally, even well executed studies in one country may not produce valid estimators of prevalences in other countries. Future studies should focus on multivariate models to explore the risk factors for lesions that are of clinical significance.

CONCLUSION

The information furnished in this present study adds to our understanding of the common oral mucosal lesions occurring in the general population. The most common oral mucosal lesion was found to be aphthous ulcer followed by irritation fibroma and traumatic ulcers. The most frequent age groups affected were between 6 to 13 years of age.

Conflict of Interest: None

Source of Support: None

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