

International Journal of Dentistry and Oral Science (IJDOS) ISSN: 2377-8075

Prevalence Of Oral Lesions In Pregnant Patients

Research Article

Jaya keerthana S1, Maragathavalli. G2*

¹ Graduate Student, Saveetha Dental college and hospitals, Saveetha Institute of Medical and Technical Science, Saveetha university, Chennai-600077
² Professor, Department of oral medicine and radiology, Saveetha Dental college and hospitals, Saveetha Institute of Medical and Technical Science, Saveetha university, Chennai-600077

Abstract

Aim of this study is to analyse the prevalence of oral lesions in pregnant patients.oral changes observed during pregnancy have been studied for many years, but the frequency of them are not stressed upon. The numerous changes occurring during pregnancy affect every body system, resulting in localized physical alterations in almost all parts of the body, including the oral cavity. A total of 28 pregnant patients were taken into the study from various clinical departments, Saveetha dental College, Chennai. The data was collected from case sheets of patients who reported for various dental treatments between the period of june 2019 to march 2020 which consists of patients demographic data, personal history, medical history ,intra and extraoral findings and photographs which are taken with patients concern . The results indicated the most common oral lesion present was gingival enlargement. There was no association between age and oral lesion . There was no prevalence of oral lesions in pregnant patients. Female patients should be informed about the role of oral health during pregnancy and the possible complications for their child's well being. If required they should refer to the dental clinician for preventive oral care and treatment.

Keywords: Age; Females; Oral Lesion; Pregnant Patients.

Introduction

An oral lesions can be a ulcer or a lesion on the mucous membrane of the oral cavity. It might be caused due to localised trauma, infections, systemic conditions, dermatological disorders. The prevalence rate of oral lesions is 4.1% in South India [1]. Oral mucositis has severe physical and mental disability during the course of the treatment prompting interventions either to prevent such occurrence or treat them[2].

The pathology in the oral tissues can be detected in saliva, as it contains the exfoliated cells from the immersed tissue [3]. Most common oral lesion which occurs in the oral cavity is recurrent aphthous ulcer. Some pathological changes are seen in the oral cavity in women during pregnancy due to the role of sex hormones in the vascular changes seen in gingiva during the pregnancy. The sex hormones also alter the normal sub gingival Microflora and immune response in the oral cavity [4]. Most commonly seen oral changes during pregnancy are pyogenic granuloma and gingivitis

[5].

Pallor of the oral mucosa due to anaemia is also seen, but these are less specific changes associated with the general health of the women .Pregnancy affects nearly every aspect of a woman's life including her oral health. Hormonal changes in the body during pregnancy make them more susceptible to oral infection and gum diseases. These dental problems not only affects the mothers but also the developing foetus.

Apart from the effects of hormonal changes, other factors such as HIV infection, lack of dental care, poor oral hygiene, smoking, low educational level, low employment status, increased age, and ethnicity contribute to a worsened periodontal condition during pregnancy.

There are even chances of getting pregnancy tumor which most frequently develops on the buccal gingiva in the interproximal tissue between teeth. This benign hyperplastic lesion of the oral

 *Corresponding Author: Maragathavalli. G, Professor, Department of oral medicine and radiology, Saveetha Dental college and hospitals, Saveetha Institute of Medical and Technical Science, Saveetha university, Chennai-600077. Tel : 9445171146 E-mail : maragathavalli@saveetha.com
 Received: May 28, 2021 Accepted: June 16, 2021 Published: July 06, 2021

Citation: Jaya keerthana S, Maragathavalli. G. Prevalence Of Oral Lesions In Pregnant Patients. Int J Dentistry Oral Sci. 2021;8(7):3105-3107. doi: http://dx.doi.org/10.19070/2377-8075-21000632

Copyright: Maragathavalli. G.[©] 2021. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution and reproduction in any medium, provided the original author and source are credited.

mucosa occurs in up to 5% of pregnancies[6]. Pregnancy tumor usually occurs at the end of the first trimester and rapid growth usually accompanies the steady increase of circulating estrogens and progestrones. Repeated mild irritation with gestational steroid changes may subsequently exacerbate inflammatory response, leading to development of this proliferating lesion.

It is important for female patients to be aware of these conditions.Normally pregnancy does not contraindicate with dental treatments.. The patient must be counselled about these transient changes, treatment plan, and reassured accordingly in their pregnancy period.Previously our team has a rich experience in working on various research projects across multiple disciplines The [7-9][10-21].The aim of the study is to analyse the prevalence of oral lesions in pregnant patients.

Materials And Methods

The study conducted was a retrospective university setup study consisting of a total of 28 pregnant patients were taken into the study, these patients were selected from the outpatient of each clinic who had come for various dental treatments, saveetha dental College and Hospital, Chennai, India.

The inclusion criteria of the study was-pregnant patients who had come to dental OPD for dental treatments for a period of nine months from(June 2019 to April 2020). Two examiners were involved in the study both evaluated the data from the reports of 86000 patients reports.

Data Collection

The collected data was based on patients who were pregnant and the datas were only collected based on patient records.

Statistical Analysis

The collected data was entered in an excel sheet and tabulated. It was then imported to SPSS software version 19. Descriptive sta-

tistics was used to know the prevalence of oral lesions in pregnant patients . The dependent variable was pregnant patients and the independent variable was age,type of oral lesions.

The ethical committee approval was obtained from the institutional ethical committee. Simple random sampling was done to eliminate bias. The. SPSS software was used to analyse the collected data..

Results And Discussion

Santosh R Patil, did a similar study but with the controlled group and he found that the changes in the oral cavity due to pregnancy was high and gingival inflammation was most commonly present compared to the control groups [22]. This study was not in accordance with our current study.

However, Dr Apeka S Dhole, did a study on oral mucosal lesions prevalent in ANC women in Nagpur population and she concluded that there was no association found between oral mucosal lesions and trimester and age of patients [23]. This study was in accordance with our current study were there was no association or prevalence of oral lesions in pregnancy.

Swati Patil, stated that proper dental healthcare programme should be conducted to improve the dental health and to increase the awareness of hygienic practice in pregnant women [24].

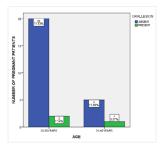
This study reports a retrospective investigation done only with the information obtained from the reports of 86000 patients, in the future large population and long-term follow-up can be considered for further studies and it would be helpful for awareness of dental health or oral health in pregnant patients and to prevent oral lesions and maintain good oral health for pregnant patients.

Comparing the above studies the study has almost patient with no oral lesion in pregnancy 89.2%, 10.7% of patients only had oral lesion in pregnancy and it is in accordance with previous literatures. A larger sample size and a long term follow up stud-

Figure1 : Bar chart represents the prevalence of oral lesion in pregnant patients, Majority of the pregnant patients did not have any oral lesions.

For the second s

Figure 2: Bar chart shows the association between Oral lesions in pregnant patient and different age groups. Chi square test was done where the Pearsonchi square value is 0.238 and the p value is 0.595 (>0.05) showing that the study is statistically not significant. Oral lesions in pregnant patients are more prevalent in age group of 20-30 years followed 31-40 years patients in pregnancy.



ies may be considered to improvise on this study.Our institution is passionate about high quality evidence based research and has excelled in various fields [25-35].

Conclusion

From the study conducted it is understood that there is no prevalence of oral lesion in pregnant patients. Clinicians should have a good knowledge and should pay attention to the oral findings while diagnosis.Female patients should be informed about the role of oral health during pregnancy and the possible complications for their child's well being. If required they should refer to the dental clinician for preventive oral care and treatment.

Author Contributions

Jaya keerthana carried out the retrospective study, planning the study design, collection and analysis of data and drafted the manuscript. Dr. Maragathavalli aided in conception of the topic, supervision and appraisal of the manuscript.

Acknowledgement

The study was supported by the University who provided insights and expertise that greatly assisted the study. We would also like to thank the reviewers of the article for their insights.

References

- Venugopal A, Uma Maheswari TN. Expression of matrix metalloproteinase-9 in oral potentially malignant disorders: A systematic review. J Oral Maxillofac Pathol. 2016 Sep-Dec;20(3):474-479.Pubmed PMID: 27721614.
- [2]. Chaitanya NC, Muthukrishnan A, Babu DBG, Kumari CS, Lakshmi MA, Palat G, et al. Role of Vitamin E and Vitamin A in Oral Mucositis Induced by Cancer Chemo/Radiotherapy- A Meta-analysis. J Clin Diagn Res. 2017 May;11(5):ZE06-ZE09.Pubmed PMID: 28658926.
- [3]. Maheswari TNU, Venugopal A, Sureshbabu NM, Ramani P. Salivary micro RNA as a potential biomarker in oral potentially malignant disorders: A systematic review. Ci Ji Yi Xue Za Zhi. 2018 Apr-Jun;30(2):55-60.Pubmed PMID: 29875583.
- [4]. Robinson P, Schmerman M. Influence of pregnancy on the oral cavity. Glob Libr Women's Med. 2015;10:38-43.
- [5]. Annan BD, Nuamah K. Oral pathologies seen in pregnant and non-pregnant women. Ghana Med J. 2005;39(1):24-7.
- [6]. Sills ES, Zegarelli DJ, Hoschander MM, Strider WE. Clinical diagnosis and management of hormonally responsive oral pregnancy tumor (pyogenic granuloma). J Reprod Med. 1996 Jul 1;41(7):467-70.
- [7]. Hafeez N. Accessory foramen in the middle cranial fossa. Res J Pharm Technol. 2016;9(11):1880-2.
- [8]. Krishnan RP, Ramani P, Sherlin HJ, Sukumaran G, Ramasubramanian A, Jayaraj G, et al. Surgical Specimen Handover from Operation Theater to Laboratory: A Survey. Ann Maxillofac Surg. 2018 Jul-Dec;8(2):234-238. Pubmed PMID: 30693238.
- [9]. 9Somasundaram S, Ravi K, Rajapandian K, Gurunathan D. Fluoride Content of Bottled Drinking Water in Chennai, Tamilnadu. J Clin Diagn Res. 2015 Oct;9(10):ZC32-4.Pubmed PMID: 26557612.
- [10]. Felicita AS. Orthodontic extrusion of Ellis Class VIII fracture of maxillary lateral incisor - The sling shot method. Saudi Dent J. 2018 Jul;30(3):265-269.Pubmed PMID: 29942113.
- [11]. Kumar S, Rahman R. Knowledge, awareness, and practices regarding biomedical waste management among undergraduate dental students. Asian J Pharm Clin Res. 2017;10(8):341.
- [12]. Gurunathan D, Shanmugaavel AK. Dental neglect among children in Chennai. J Indian Soc Pedod Prev Dent. 2016 Oct 1;34(4):364.
- [13]. Sneha S. Knowledge and awareness regarding antibiotic prophylaxis for infective endocarditis among undergraduate dental students. Asian J Pharm Clin Res. 2016 Oct 1:154-9.
- [14]. 1Dhinesh B, Lalvani JI, Parthasarathy M, Annamalai K. An assessment on performance, emission and combustion characteristics of single cylinder

diesel engine powered by Cymbopogon flexuosus biofuel. Energy Convers. Manag. 2016 Jun 1;117:466-74.

- [15]. Choudhari S, Thenmozhi MS. Occurrence and Importance of Posterior Condylar Foramen. Res J Pharm Technol. 2016;9(8): 11–43.
- [16]. Paramasivam A, Vijayashree Priyadharsini J, Raghunandhakumar S. N6adenosine methylation (m6A): a promising new molecular target in hypertension and cardiovascular diseases. Hypertens Res. 2020 Feb;43(2):153-154.Pubmed PMID: 31578458.
- [17]. Wu F, Zhu J, Li G, Wang J, Veeraraghavan VP, Krishna Mohan S, et al. Biologically synthesized green gold nanoparticles from Siberian ginseng induce growth-inhibitory effect on melanoma cells (B16). Artif Cells Nanomed Biotechnol. 2019 Dec;47(1):3297-3305.Pubmed PMID: 31379212.
- [18]. Palati S, Ramani P, Shrelin HJ, Sukumaran G, Ramasubramanian A, Don KR, et al. Knowledge, Attitude and practice survey on the perspective of oral lesions and dental health in geriatric patients residing in old age homes. Indian J Dent Res. 2020 Jan-Feb;31(1):22-25.Pubmed PMID: 32246676.
- [19]. Saravanan M, Arokiyaraj S, Lakshmi T, Pugazhendhi A. Synthesis of silver nanoparticles from Phenerochaete chrysosporium (MTCC-787) and their antibacterial activity against human pathogenic bacteria. Microb Pathog. 2018 Apr;117:68-72.Pubmed PMID: 29427709.
- [20]. Govindaraju L, Gurunathan D. Effectiveness of Chewable Tooth Brush in Children-A Prospective Clinical Study. J Clin Diagn Res. 2017 Mar;11(3):ZC31-ZC34.Pubmed PMID: 28511505.
- [21]. Vijayakumar Jain S, Muthusekhar MR, Baig MF, Senthilnathan P, Loganathan S, Abdul Wahab PU, et al. Evaluation of Three-Dimensional Changes in Pharyngeal Airway Following Isolated Lefort One Osteotomy for the Correction of Vertical Maxillary Excess: A Prospective Study. J Maxillofac Oral Surg. 2019 Mar;18(1):139-146.Pubmed PMID: 30728705.
- [22]. Patil SR. Oral changes in pregnant and nonpregnant women: A case-control study. J. Orofac. Sci. 2013 Jul 1;5(2):118.
- [23]. Dhole AS. Oral mucosal lesions prevalent in ANC women in Nagpur population. IOSR J Dent Med Sci. 2014;13:37-8.
- [24]. Patil S, Ranka R, Chaudhary M, Hande A, Sharma P. Prevalence of dental caries and gingivitis among pregnant and nonpregnant women. J Datta Meghe Inst Med Sci. 2018 Jan 1;13(1):44.
- [25]. Vijayashree Priyadharsini J. In silico validation of the non-antibiotic drugs acetaminophen and ibuprofen as antibacterial agents against red complex pathogens. J Periodontol. 2019 Dec;90(12):1441-1448.Pubmed PMID: 31257588.
- [26]. Pc J, Marimuthu T, Devadoss P, Kumar SM. Prevalence and measurement of anterior loop of the mandibular canal using CBCT: A cross sectional study. Clin Implant Dent Relat Res. 2018 Apr 6;20(4):531-4.
- [27]. Ramesh A, Varghese S, Jayakumar ND, Malaiappan S. Comparative estimation of sulfiredoxin levels between chronic periodontitis and healthy patients - A case-control study. J Periodontol. 2018 Oct;89(10):1241-1248.Pubmed PMID: 30044495.
- [28]. Ramadurai N, Gurunathan D, Samuel AV, Subramanian E, Rodrigues SJ. Effectiveness of 2% Articaine as an anesthetic agent in children: randomized controlled trial. Clin Oral Investig. 2019 Sep;23(9):3543-50.
- [29]. Sridharan G, Ramani P, Patankar S, Vijayaraghavan R. Evaluation of salivary metabolomics in oral leukoplakia and oral squamous cell carcinoma. J. Oral Pathol. Med. 2019 Apr;48(4):299-306.
- [30]. Ezhilarasan D, Apoorva VS, Ashok Vardhan N. Syzygium cumini extract induced reactive oxygen species-mediated apoptosis in human oral squamous carcinoma cells. J Oral Pathol Med. 2019 Feb;48(2):115-121.Pubmed PMID: 30451321.
- [31]. Mathew MG, Samuel SR, Soni AJ, Roopa KB. Evaluation of adhesion of Streptococcus mutans, plaque accumulation on zirconia and stainless steel crowns, and surrounding gingival inflammation in primary molars: randomized controlled trial. Clin Oral Investig. 2020 Sep;24(9):1–6.Pubmed PMID: 31955271.
- [32]. Samuel SR. Can 5-year-olds sensibly self-report the impact of developmental enamel defects on their quality of life? Int J Paediatr Dent. 2021 Mar;31(2):285-286.Pubmed PMID: 32416620.
- [33]. R H, Ramani P, Ramanathan A, R JM, S G, Ramasubramanian A, et al. CYP2 C9 polymorphism among patients with oral squamous cell carcinoma and its role in altering the metabolism of benzo[a]pyrene. Oral Surg Oral Med Oral Pathol Oral Radiol. 2020 Sep;130(3):306-312.Pubmed PMID: 32773350.
- [34]. Chandrasekar R, Chandrasekhar S, Sundari KKS, Ravi P. Development and validation of a formula for objective assessment of cervical vertebral bone age. Prog Orthod. 2020 Oct 12;21(1):38.Pubmed PMID: 33043408.
- [35]. Vijayashree Priyadharsini J, Smiline Girija AS, Paramasivam A. In silico analysis of virulence genes in an emerging dental pathogen A. baumannii and related species. Arch Oral Biol. 2018 Oct;94:93-98.Pubmed PMID: 30015217.