

Knowledge and Awareness about Periodontal Health among Pregnant Women-A Questionnaire Based Study

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Abstract

Background : Periodontitis is a multifactorial disease with numerous systemic or local risk factors playing a part in its clinical sequences. There are many systemic conditions that may affect the periodontal status, pregnancy is one of them. The main cause of periodontal disease is bacterial plaque but, many physiological and hormonal changes in women during pregnancy can play a key role. These hormonal changes increase risk for developing problems like gingivitis and periodontitis. Hence an investigation is performed to assess the awareness of periodontitis among pregnant women.

Aim: The aim of the study is to assess the awareness about periodontal health in pregnant women.

Materials and methods : A questionnaire based study was conducted on 100 pregnant women. Each one were given a self-administered, pretested, multiple choice questionnaire to solve. The questionnaire consisted a total

of 15 questions based on oral hygiene measures and awareness about periodontal disease during pregnancy.

Results: Results showed that the study population had poor knowledge about periodontal health. Some of them were not aware about the importance of dental check-ups during pregnancy. There is lack of awareness about periodontal problems among pregnant women.

Conclusion: In this study awareness and knowledge level of periodontal health among pregnant women was found to be low. Possible effort should be made to educate people regarding periodontal health.

Key-words: Pregnancy, Periodontal health, Periodontitis

Introduction

Periodontal Disease is a destructive inflammatory disorder of the hard and soft tissues surrounding teeth.¹ It is a multifactorial disease with numerous systemic or local risk factors playing a part in its clinical sequences. There are many systemic conditions that may affect the periodontal status, pregnancy is one of them. Although the

main cause of periodontal disease is bacterial plaque , many physiological and hormonal changes in women during pregnancy can play a key role. The various physiological changes in the body occurring during pregnancy are brought about by the circulating female sex hormones.² A number of oral changes are inevitable during pregnancy. Immunological, dietary and behavioural factors associated with pregnancy are believed to be contributing factors.

High levels of circulating progesterone lead to pregnancy gingivitis which is characterized by increased, redness, oedema and higher tendency toward bleeding. These hormonal changes in pregnancy combined with neglected oral hygiene tend to increase the incidence of oral diseases.³ Pregnant women are particularly susceptible to gingival and periodontal diseases.⁴⁻⁶

The infected periodontium can represent an endocrine like source of potentially deleterious cytokines and lipid mediators which may increase the likelihood of adverse pregnancy outcomes.⁷ And also may unknowingly increase perinatal risk which include premature birth, low birth weight babies, pre-eclampsia, ulcerations of the gingival tissue, pregnancy granuloma, and tooth erosion.^{7,8}

The link between periodontitis and pregnancy has been known since many years. In recent times there has been evidence indicating an inverse relationship to systemic health. Offenbacher et al. have provided evidence that untreated periodontal disease in pregnant women may be a significant risk factor for preterm-low-birth weight infants Research linking periodontitis to the risk for adverse birth outcomes has resulted in increased interest in the topic of oral health during pregnancy.⁹ Various studies have been conducted regarding the same. Hence an investigation was performed to assess the knowledge and awareness about oral hygiene measures, the oral health and the various changes seen in gingiva during pregnancy.

Subjects and Methods

A descriptive cross-sectional study (questionnaire) was conducted on 100 pregnant women at MNR Dental College and Hospital, Sangareddy. The demographic data included the age , address & the month of pregnancy. The questionnaire consisted of 15 structured questions regarding the oral hygiene measures , knowledge and awareness questions about the oral health and the changes seen in gingiva during pregnancy. A self-administered, pretested, multiple choice questionnaire sheets were given to the population under study. The questions comprised of various clinical changes occurring during pregnancy, oral hygiene maintenance & the treatment regimes to be followed , the complications occurring during pregnancy due to gum disease & awareness of regular dental checkups. The inclusion criteria were female subjects , age group of 18-35 years & pregnant women of any trimester . The exclusion criteria were patients with systemic illness ,pregnant women who were not willing to participate in the study & uncooperative subjects .

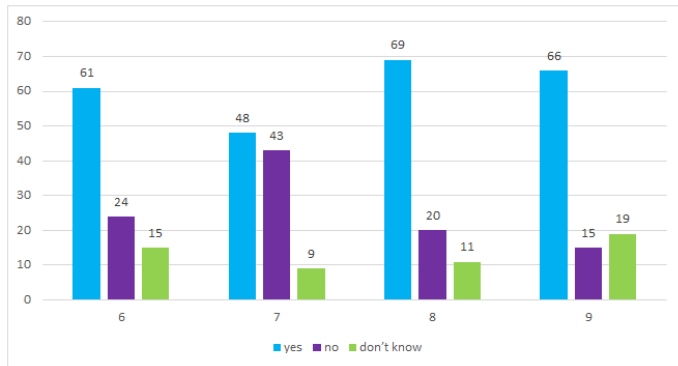
The response given by the study population were divided into three parts based on various clinical changes occurring during pregnancy, oral hygiene maintenance & the treatment regimes to be followed as well as the complications occurring during pregnancy due to gum disease and awareness of regular dental checkups during pregnancy.

The data was obtained and the results were tabulated in a Microsoft excel sheet . The collected data was analysed by taking percentage of means of the three groups & chi - square test .The analysis was carried out by Microsoft excel 2016 MSO 16.0.13628.

Results

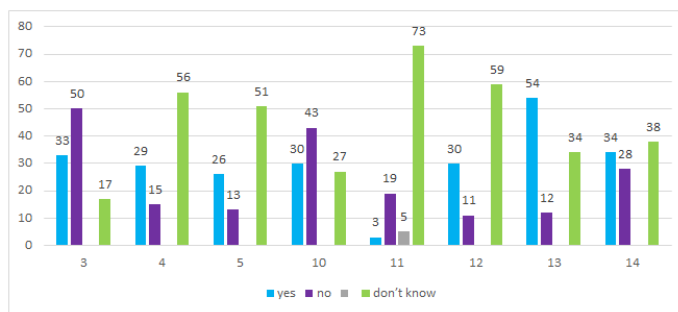
The results obtained from the periodontal health awareness questionnaire were compiled and were tabulated and graphically represented. Descriptive

tabulations were done using the response given by the study population into three bar diagrams (table 1.1 ,1.2 ,1.3) .



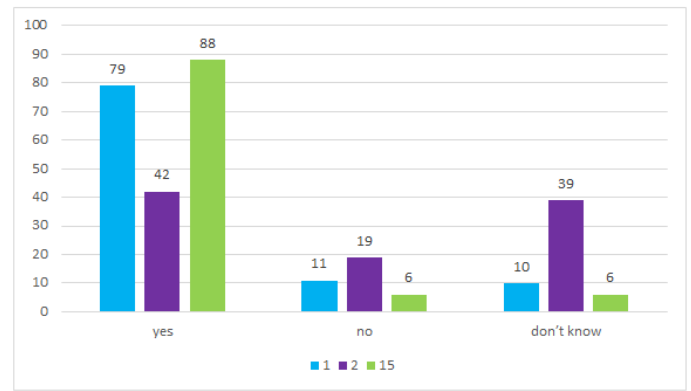
Graph 1: Various clinical changes occurring during pregnancy

The above bar diagram depicts the data (Graph 1) obtained regarding various clinical changes occurring during pregnancy 61% of the study population has noticed clinical changes such as swelling & bleeding of gums loosening of teeth occurring in oral cavity during pregnancy. 25.5% did not observe any clinical changes & 13.5% of them didn't know about the clinical changes that may occur during pregnancy.



Graph 2: The oral hygiene maintenance, the treatment regimes to be followed & the complications occurring during pregnancy due to gum disease.

Upon analyzing the above data (Graph 2) , it showed that 44.3 % of them did not know about oral hygiene practices & treatment regimes that has to be followed during pregnancy but 29.8% of the study population were aware of it.25.9 % of them had negative opinion about regular dental check ups maintaining good oral hygiene .



Graph 3: Awareness of regular dental check-ups during pregnancy

The bar diagram (Graph 3) describes that 42% of them know that good oral hygiene maintenance is required & 88% of them think awareness needs to be created regarding association of pregnancy & periodontal changes. Therefore the results showed that though the study population noticed various clinical changes in the oral cavity during pregnancy they had poor knowledge about association of periodontal health & pregnancy. Some of them were not aware about the importance of dental check-ups & treatment during pregnancy & thus there was lack of awareness about periodontal problems among population under study.

Discussion: Our study has revealed that, the study population noticed various clinical changes in the oral cavity during pregnancy but had poor knowledge about association of periodontal health & pregnancy while some of them were not aware about the importance of dental check-ups & treatment during pregnancy.

When a similar kind of study was conducted by Boggess et al. on 599 individuals, the results showed that pregnant women have little knowledge on oral health association with pregnancy, which varied according to maternal race or ethnicity. [10] A study done by Gupta et al. stated that the level of awareness is very low (60%) irrespective of education and age.¹¹

Failure to attend a dentist on a regular basis and lack of understanding about the importance of maintaining oral hygiene may be because some women simply cannot afford to maintain an adequate level of dental hygiene or regular dental visits. The results of pregnant women's knowledge of the gingival and periodontal status in our study was found similar to the results of the present study conducted by HA Alwaeli et al.¹² and Shilpi et al.¹³ who concluded that knowledge and awareness for pregnant women about their teeth and gingival condition is generally poor. Before and during pregnancy simple educational preventive programmes on oral self-care and disease prevention should be provided to improve oral health. Educating and motivating women to maintain good oral hygiene and providing affordable dental health care is fundamental in reducing dental disease. Improving dental education may need to become a priority in antenatal care to educate women at risk of the importance of maintaining oral health. And this was also reported in a study conducted by Negi et al wherein 75% of the pregnant women had had limited knowledge regarding the periodontal complications and its effect on pregnancy.¹⁴ More than half of the participants in either of the groups felt that treatment should not be done during pregnancy, which clearly reflected the lack of awareness regarding the safety of dental treatment which happened to be the cause for many people not coming forward for dental treatment. Furthermore, parameters such as education and social status may influence and alter the results. However, this study strongly supports the existing evidence on the lack of awareness among pregnant women regarding the importance of oral health. Hence, more coordinated efforts from dentists and gynaecologists are required for ensuring maternal health and a safe pregnancy.

Conclusion

Despite several decades of major improvements in diagnostic and therapeutic systems used in antenatal care, the rates of many complications occurring during pregnancy are not decreasing, including preterm birth. One of the reason for it can be the lack of awareness about the association between periodontal health and pregnancy outcomes. In this study awareness and knowledge level of periodontal health among pregnant women was found to be low. Possible effort should be made to educate people by organizing interactive workshops regarding periodontal health & its association with pregnancy to create awareness and make them realize the importance of it.

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