Journal of Advanced Clinical & Research Insights (2019), 6, 100–105

ORIGINAL ARTICLE

Awareness, attitude, and practices toward maintenance of oral health among pregnant women and oral health awareness and attitude among gynecologists in Hubli and Dharwad

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Keywords:
Dental awareness, oral health and pregnancy, oral hygiene

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Received: 13 June 2019;
Accepted: 25 July 2019

doi: 10.15713/ins.jcri.270

Abstract

Aims and Objectives: The aim of the study was to determine the awareness, attitude, and practices toward the maintenance of oral health among pregnant women and to appraise the awareness and attitude among gynecologists regarding the oral health of expectant mother, using self-questionnaires.

Study Design: Cross-sectional survey was conducted among 100 pregnant women, and the findings were recorded along with a closed-ended questionnaire and documented in a specially designed pro forma. The response to another set of questions answered by 65 practicing gynecologists from government and private hospitals in twin cities of Hubli-Dharwad was recorded in a separate pro forma.

Results: Analysis of data revealed that 65% of pregnant patients were unaware of pregnancy-related oral diseases. Although 83% of the gynecologist's considered oral health as a part of prenatal care, only 49% of the gynecologists were little aware of oral manifestations caused by hormonal changes during pregnancy.

Conclusion: The complete results here suggest that awareness, knowledge, and practices of pregnant women have to be essentially upgraded. The findings of this survey with gynecologists indicate the need to update their knowledge regarding oral health in expectant mothers.

Introduction

Various physiological conditions can bring certain reversible changes in oral health in a women's lifetime. Conditions such as puberty, pregnancy, and menopause also have a considerable effect on women's oral health.[1]

Moreover, expectant women are susceptible to gingival and periodontal diseases in particular. Pregnant women may not experience symptoms until advanced stages of the disease and therefore, unknowingly experience increased perinatal risk. Premature birth, low birth weight babies, pre-eclampsia, ulcerations of the gingival tissue, pregnancy granuloma, and tooth erosion are few of the associated risks that are involved when there is lack of awareness among expectant mothers.[2-5]

Furthermore, practices such as intake of certain drugs such as tetracycline, chloramphenicol, and aspirin and exposure to radiation,[6,7] and practices such as smoking and alcoholism furthermore carry adverse pregnancy outcome or birth defects.

Many women fail to understand the importance of oral care in pregnancy, while others experience barriers to care. The period where dental treatment should be taken is also of considerable interest to a pregnant woman and therefore pregnant population poses a unique situation to assess oral health knowledge.

Although there is ample literature regarding the oral health status of expecting mothers, insufficient data are available from Indian subcontinent regarding their awareness and motivation of these pregnant women toward the maintenance of good oral hygiene and regular dental check-ups during pregnancy.[8,9]

Any educational program can have long-lasting impact on improvising oral health of pregnant women. Thus, a need arises to know the awareness of these patients regarding their motivation toward regular dental check-ups during pregnancy.

All members of the health vocation within their scope of duties have the potential to promote oral health by supporting precise oral health-care messages, encouraging regular dental

visits to patients, and participating in oral health-promoting activities.[10]

On the other hand, gynecologists/obstetricians are the ones who see expectant mothers and infants much earlier than dentists. Therefore, it is essential for gynecologists/obstetricians to be aware of the infectious nature of oral diseases and its associated risk factors and make appropriate decisions regarding timely and effective intervention to prevent the disease progression.[11]

Conditions such as preterm and low birth weight deliveries and also other complications related to dental diseases could be foiled by improving the oral health of pregnant women. Hence, it becomes necessary for gynecologists/obstetricians to be aware of risk factors associated with oral health so as to detect and guide the women visiting their clinics/hospitals for routine maternity care.

Gynecologists may be able to play an important role in improving the oral health of expectant mothers by essentially involving themselves during pregnancy care visits.

Although it is unclear to what extent gynecologists/obstetricians are truly aware of preventive strategies of dental diseases and to what extent they can impart preventive dental counseling as a part of routine pregnancy visits. Therefore the present study was designed to assess the Attitude & Awareness among practicing gynaecologists and to also assess the knowledge, attitude & practices regarding oral health of expectant mothers in twin cities of Hubli-Dharwad.

Methodology

The present study is a cross-sectional survey conducted among the pregnant women and among practicing gynecologists from government and private hospitals in twin cities of Hubli-Dharwad. Ethical clearance is obtained from the Institutional Ethical Committee.

A total of 100 pregnant women and 65 gynecologists comprised the study population. A study-specific closed-ended questionnaire was prepared to collect the data from both pregnant women and gynecologists. Informed consent was obtained from the study participants. The questionnaires were distributed to the subjects separately.

Women who were checked for the preliminary pregnancy test confirmation were included. Pregnant women who are experiencing labor pain, or having serious systemic illness, along with those who are uncooperative or unwilling to give consent were excluded from the study.

The socio-demographic information was recorded using personal interviews with the patients. Pregnant women were asked to complete questionnaires in front of the investigator. Patients who were uneducated or ones who did not follow questionnaire were verbally explained with all questions and answers were elicited.

The questions for pregnant women were based on knowledge, awareness, and practices related to pregnancy and also questions pertaining to their oral health, oral hygiene, gingival conditions, utilization of dental health facilities, habits, and intake of medications were included in the study.

Gynecologists/obstetricians, registered under the local branch of Indian Medical Association, practicing in twin cities of Hubli and Dharwad were included, and gynecologists who were not willing to participate and non-practicing gynecologists were excluded from the study.

Questions pertaining to attitude and awareness toward oral health were distributed among the gynecologists. For each gynecologist, the questionnaire was given on the first visit and collected back on the same day. Subjects were given a time of 10 min to fill up the questionnaires.

The collected information of the data was entered into Microsoft Excel and then subjected to statistical analysis using SPSS 11 software. Data were further subjected to descriptive statistics, and Chi-square was done to know the association between the variables.

Results

Demographics

The majority (53%) of patients belonged to <25 years of age [Figure 1]. About 45% of the pregnant women were graduates and 65% of them belonged to the urban area [Figure 2]. Furthermore, 76% of them were in more than 6 months stage of pregnancy (third trimester), 17% of women were in their

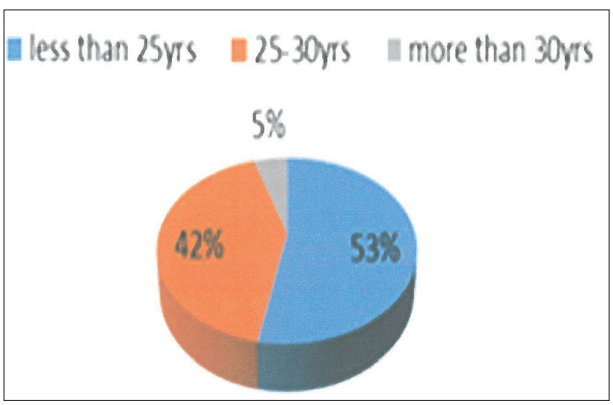


Figure 1: Age

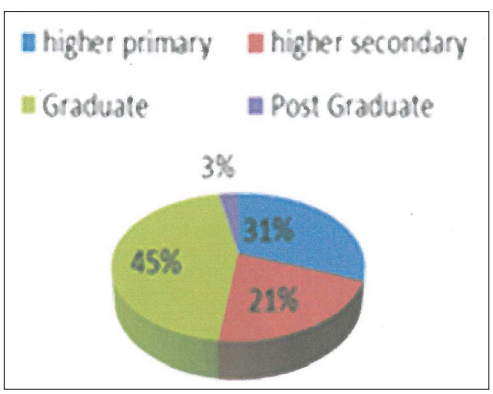


Figure 2: Education

second trimester, and remaining 7% were in their first trimester [Figure 3].

There was no significant difference in the awareness of oral health in pregnant women with respect to age groups, place of residence, and stage of pregnancy. However, there was a positive response in graduates and postgraduates regarding the knowledge about pregnancy-related oral changes compared to others.

Response to questions pertaining to knowledge regarding oral health during pregnancy [Graph 1]

More than 85% of pregnant women believed that importance should be given for oral health during pregnancy. However, only 12% of them were aware of pregnancy-related oral diseases, whereas more than 60% where unaware of pregnancy-related oral diseases.

Majority of pregnant women (72%) were unaware regarding risk associated with high dose of X-ray exposure whereas only 18% of them were little aware of the risk associated with high dose of X-ray exposure, and only 10% of them knew a little about safe period during pregnancy, and more than 80% of them were not aware regarding safe period for dental treatment during pregnancy.

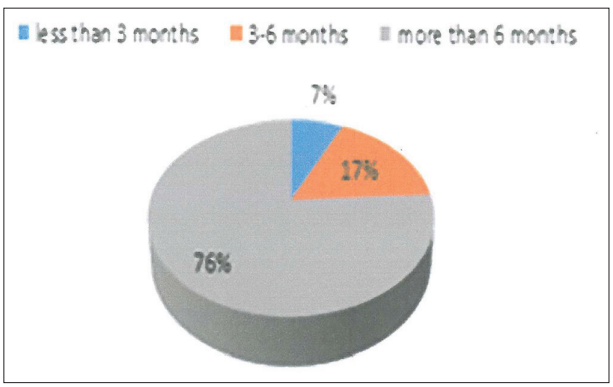


Figure 3: Stage of pregnancy

Interestingly, 72% of pregnant women did not have any history of previous dental check-ups and around 5% of them had consulted gynecologists for dental problem during pregnancy.

Around 11% of pregnant women said that cost is a barrier to receiving dental treatment.

Regarding the oral hygiene practices and dental experiences during pregnancy period, 54% of them used to brush twice daily, whereas 80% of them never used mouthwashes. About 8% of women were hesitant to brush since they experienced bleeding because of swollen gums.

Majority of them did not receive any medications for dental pain without prescription of a dentist.

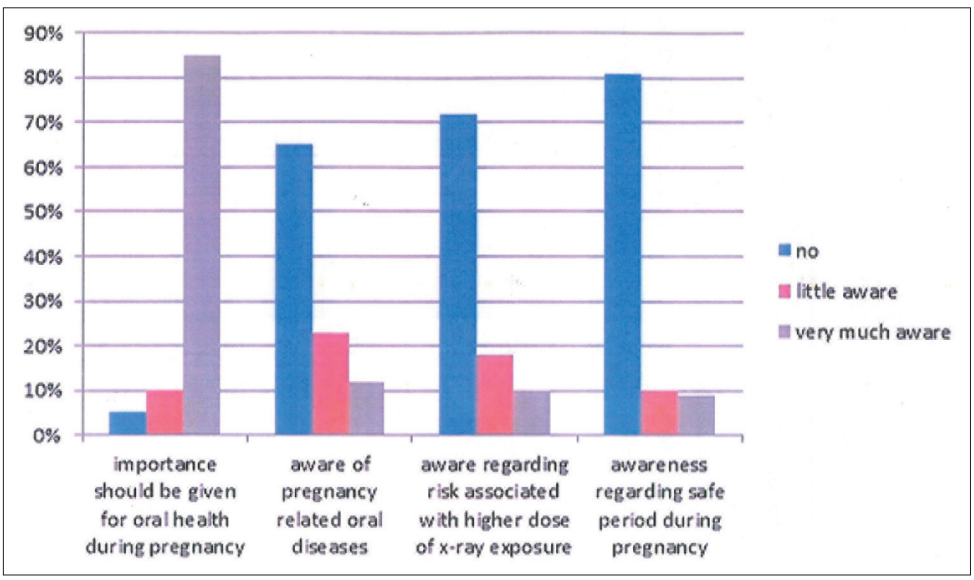
The response to the questionnaire completed by the clinicians shows that 73% of doctors said that pregnant women need regular dental check-up, but only 35% of them advised patients to get a routine check-up.

Only 8% of them discussed about oral health during pregnancy with their patients, whereas 70% of them did not discuss with their patients. About 29% of practitioner's were aware of oral manifestations caused by hormonal changes during pregnancy. However, only 20% of doctors advised patients regarding changes in the oral cavity during pregnancy [Graph 2].

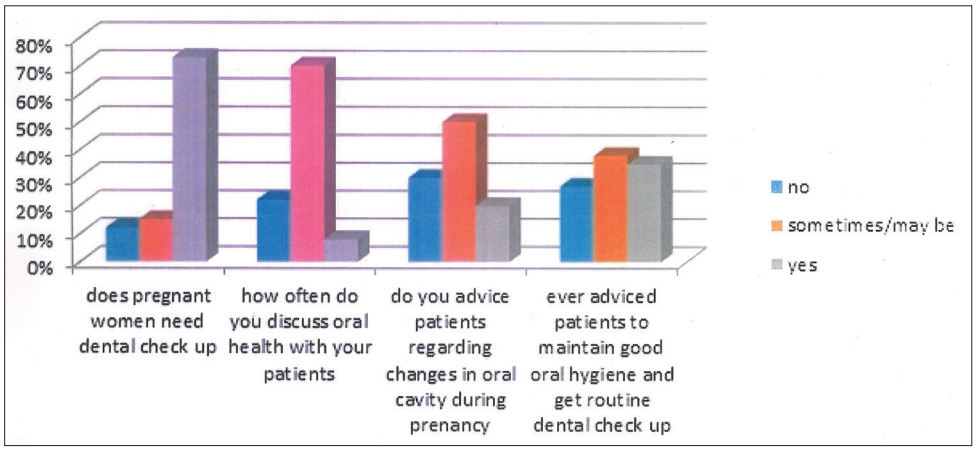
About 45% of practitioner's knew about the negative side effects of periodontitis on birth outcomes such as preeclampsia and premature delivery and about periodontal infections causing low birth weight babies. Unfortunately, more than 35% of practitioners said that dental treatment can be delivered safely at any time during pregnancy [Graph 3].

Discussion

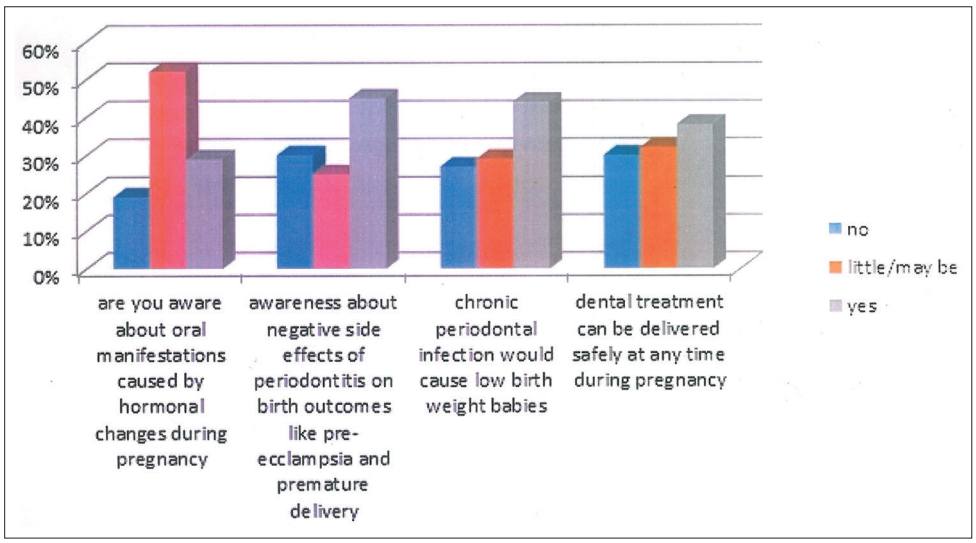
Pregnant woman who presents for dental care needs special consideration for better health of both expectant mother and babies.



Graph 1: Awareness of oral health during pregnancy



Graph 2: Attitude toward oral health care in expectant mothers among gynecologists



Graph 3: Awareness and knowledge of gynecologists toward oral health care in expectant mothers

Susceptibility to oral infections including periodontal disease gets increased by factors such as immunologic and hormonal changes that occur during pregnancy.

Out of many oral changes that occur during pregnancy, the most common ones include gingivitis and pregnancy epulis.[12] Many studies state that stimulation of increased levels of prostaglandins by periodontal infection would disrupt the hormonal homeostasis.[13]

Understanding the physiologic changes associated with pregnancy and their effects on oral health are essential for providing quality care for pregnant women. As suggested by the American Dental Association if possible, elective dental care should be avoided, during the first and the last one half of the third trimester.[14-18]

California dental association foundation oral health care during pregnancy and early childhood: Evidence-based guidelines for health professionals concluded in their study that treatment of oral diseases, including use of dental X-rays and the use of local anesthesia, are highly beneficial to patients and can be carried out during pregnancy without any fetal or maternal risk in comparison to the risk of not providing care.[19]

Majority of the pregnant women participating in our study were in the age of <25 years. However, there was no significant difference in the awareness of oral health in pregnant women with respect to age groups, place of residence, and stage of pregnancy.

There was a positive response regarding the knowledge about pregnancy-related oral changes in graduates and postgraduates compared to other participants.

The decrease in infant caries and reduction in poor prenatal consequences is possible by providing appropriate oral health care and prevention of disease progression. Certain Benign conditions like gingivitis pregnancy tumors require only monitoring and reassurance.

The safe period to perform dental procedures such as restorations, extractions, periodontal treatment, and diagnostic

procedures is during the second trimester when organogenesis is complete.[20,21]

We found that 65% of pregnant patients were unaware of pregnancy-related oral diseases and 73% of them were unaware of risks associated with exposure to a higher dose of X-rays.

Majority of the expectant mothers (81%) did not know about the safe period for undergoing dental treatment during pregnancy.

It is difficult to perform dental procedures during the third trimester of pregnancy since there are positional discomfort and risk of vena cava compression. However, these conditions can be resolved by propping the woman on the left side to move the uterus of the vena cava and placing a pillow/cushion under the patient's right hip.[22]

Majority of respondents in our study were unaware of the safe period for dental treatment and hazards associated with exposure to a high dose of radiation during pregnancy. Although gingivitis is common and is a reversible condition, it requires significant attention during pregnancy. Epidemiological studies show the prevalence of pregnancy gingivitis ranging from about 35% to 100%.[23]

About 11% of pregnant women were hesitant to brush teeth since they experienced bleeding because of swollen gums in the present study. None of these subjects had H/O smoking or alcohol.

Besides the lack of practice standards, barriers to dental care during pregnancy also occurs since a lot of people carry persistent myths and apprehensions for fetal safety during pregnancy. This again may be due to insufficient information and counseling about prenatal and infant oral health.[13,24]

However, this drawback can be addressed thoroughly if gynecologists involve themselves in providing prenatal counseling about oral health to pregnant patients during routine maternity visits. This would also improve the dental health of expectant mothers significantly.

Barely 5% of respondents consulted their gynecologist or obstetrician for oral health problems. This again suggests that pregnant patients should be encouraged to seek prompt care for acute dental problems and schedule management of the same during the second trimester.

In the present study, 83% of the gynecologist's considered oral health as a part of prenatal care. About 72% said that only sometimes they discuss the oral health with their patients and only 52% of them sometimes advice patients regarding oral cavity changes during pregnancy.

This suggests the need for gynecologist or obstetrician to encourage pregnant women to visit the dentist for oral health issues, especially in developing countries with semi-urban and rural populations, where access to professional dental care is difficult. This is where a gynecologist plays an important role in convincing all their patients for receiving timely preventive dental care.

Only 49% of the gynecologists were little aware of oral manifestations caused by hormonal changes during pregnancy, and unfortunately, 40% of them said that dental treatment can be delivered safely at any time during pregnancy.

To conclude, we feel that dental health education should be incorporated into prenatal health-care professionals so as to modify the perceptions of health-care professionals.

Gynecologists, therefore, can be very influential in encouraging pregnant women to maintain good oral hygiene, to visit a dentist, and to promote completion of all desirable treatment during the course of pregnancy.

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How to cite this article: Karkera NK, Guttal KS, Burde KN, Nandimath K. Awareness, attitude, and practices toward maintenance of oral health among pregnant women and oral health awareness and attitude among gynecologists in Hubli and Dharwad. J Adv Clin Res Insights 2019;6: 100-105.