Research Article

Knowledge, Attitude and Practice Behaviours among Gynaecologists and Dental Practitioners towards Oral Health in Pregnant Patients

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ABSTRACT

The aim of study was to assess the current knowledge, attitude and practice behaviours of gynaecologists and dentists as to the dental care to pregnant patients. Improving the oral health of pregnant women prevents complications of dental diseases during pregnancy. It has the potential to decrease early childhood caries and may reduce preterm and low birth weight deliveries. A pretested questionnaire containing 12 questions that aimed to evaluate the knowledge and practiced behaviors of the gynecologists and dental practitioners towards oral health care of pregnant patients. A total of 27 gynaecologists and 27 dental practitioners were approached to voluntarily participate and fill up the questionnaire. The results were tabulated and statistically analysed. 91.1%' of the gynaecologists never examined the oral cavity during routine check-ups. 81.5% of the dental practitioners felt that oral health screening and referral to dentist should be routinely included in prenatal care. Oral health professionals require knowledge on pregnancy specific education to provide appropriate preventive and curative care to pregnant patients. Maternal health care professionals can play an essential role in connecting pregnant woman to the source of dental care to promote good oral health.

Keywords: gynaecologist, dentist, pregnancy, prenatal care, birth outcomes.

INTRODUCTION

Pregnancy is a special state for a woman, which is associated with a myriad of emotional and physiological changes in different parts of body including oral cavity and dental health. These changes predispose women to dental caries and gingivitis.[1]

Most women do not access oral health care during pregnancy despite evidence that poor oral health can have an adverse impact on the health of a pregnant woman and her child.[2]

During the past few years, there has been increasing interest in the oral health of pregnant patients. One reason is the reported association between maternal periodontal infection during pregnancy and obstetric complications including preeclampsia and premature birth.[3]

Pregnancy gingivitis and periodontitis is by far the most common oral condition observed amongst pregnant patients. During pregnancy, there is an increase in the hormones estrogen and progesterone. These hormones have been found to affect periodontal disease progress and wound healing. Both these hormones lead to increased gingival vascularization and decreased immune response. Moreover, studies reveal that during pregnancy, there is increase in some types of microorganisms (*Provetella* species) which tend to utilize the steroidal hormones of pregnancy for their growth. These microorganisms increase the tendency of the gums to bleed and worsen gingival inflammation. As a result, pregnant patients have severe gingival inflammation even with reasonably low plaque levels.[4]

Improving the oral health of pregnant women prevents complications of dental diseases during pregnancy. It has the potential to decrease early childhood caries and may reduce preterm and low birth weight deliveries. Evidence suggests that most young children acquire caries-causing bacteria from mothers. Cariogenic or decay-causing bacteria are typically transmitted from mother or caregiver to child by behaviours that directly pass saliva, such as sharing a spoon when tasting baby food.[5]

This study was done to evaluate the knowledge, attitude, practice behaviors and barriers regarding prenatal oral health care among gynecologists and general dental practitioners.

MATERIALS AND METHODS

A pretested questionnaire containing 12 questions that aimed to evaluate the knowledge and practiced behaviors of the gynecologists and dental practitioners towards oral health care of pregnant patients. A total of 27 gynaecologists and 27 dental practitioners were approached to voluntarily participate and fill up the questionnaire.

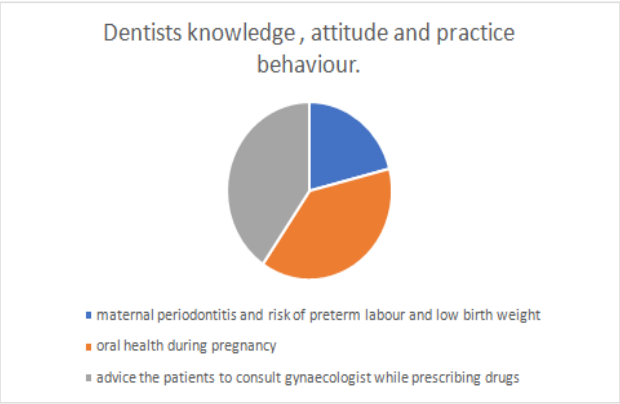
The questionnaire had demographic information about all participants, and Knowledge, attitude, practice behaviours (KAP) about preventive care, routine checkup and prescribing medications to pregnant patients. Questions also included about prescribed drugs to patients to control pain or treat infection. Especially about paracetamol, ibuprofen, aspirin non-steroidal anti-inflammatory drugs (NSAIDs) and specific antibiotic

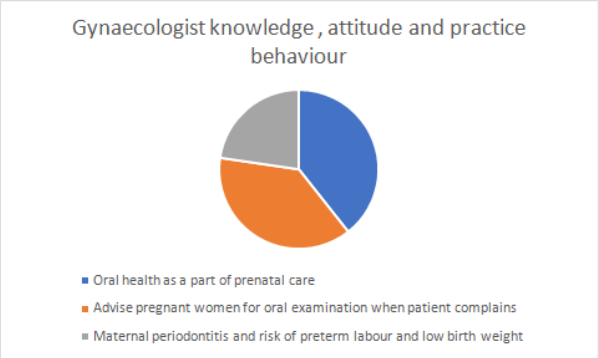
agents such as doxycycline, penicillin and metronidazole. The results were tabulated and statistically analysed.

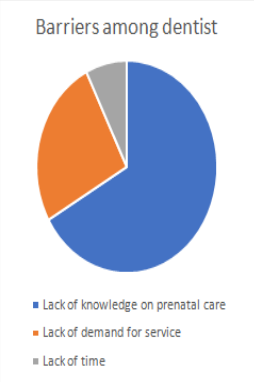
RESULTS

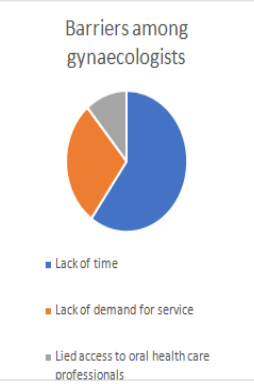
Association between pregnancy outcomes and oral health was recorded on the basis of gynaecologists knowledge. Gynaecologists with lack of time and limited access to the oral health care professionals (60% , 36.7%) were less likely refer to oral care services for pregnant patients. 91.1%'of the gynaecologists never examined the oral cavity during routine check-ups. They were aware about maternal periodontitis and its adverse outcomes (61.4% - pre eclampsia, 56.7% - preterm labour and low birth weight.). About the indication of antibiotics, the practice behaviours of gynaecologists towards the use of tetracycline in pregnant women and its birth outcomes were assessed. About 89% of gynaecologists never prescribed tetracycline as an antibiotic to pregnant patients and about 73.7% of gynaecologists felt that tetracycline is not safe for the foetus.

Attitude, knowledge and practice behaviours of dental practitioners were recorded. 51.9% of the dentists felt that dental treatment can be delivered safely at any time during pregnancy. They were also aware about maternal periodontitis and its adverse outcomes (44.4% - pre eclampsia, 48.1% - preterm labour and low birth weight). 40.7% of the dentists were aware that cariogenic bacteria can be transferred from mother to the off springs. As to indications of good oral health, 85.2% of the dentists formulated diet plans for prevention of dental caries and periodontitis, 81.5% of the dental practitioners felt that oral health screening and referral to dentist should be routinely included in prenatal care. About 92.6% of the dental practitioners referred the pregnant patients to consult their gynaecologists while prescribing drugs. As an indication of analgesics, paracetamol was the first choice by 55.4% dental practitioners and penicillin was the first choice of antibiotic drug by 57.9% dental practitioners. A total of 66.7% of the dentists felt that lack of knowledge on prenatal oral health care as a barrier for inappropriate oral health care of pregnant patients.









DISCUSSION

World health organization defines oral health as "being free of chronic mouth and facial pain, oral and throat cancer and other diseases and disorders that affect the mouth and oral cavity". Oral health is essential to the health and well-being of both the pregnant mother and her baby.[6]

Recent studies shows a positive correlation between presence and severity of periodontal disease and risk of premature labor and low birth-weight.[7] Of all the changes, the most well-known is the pregnancy gingivitis and pregnancy epulis (alternate names - pregnancy tumour, epulisgravidarum, pregnancy granuloma). A bacterial film that grows on the teeth, resulting in plaque accumulation is the cause for the disease. The hormonal changes during pregnancy will induce high levels of prostaglandins by periodontal infectionthat would disrupt the hormonal homeostasis which exaggerate the gum tissues react to the bacteria in plaque, thus resulting in a higher chance of pregnant women getting gingivitis.[3]

Periodontal pathogens have been found not only in supra and sub gingival plaque, gingivo-crevicular fluid, and periodontal tissues, but also dispersed systemically in maternal serum and plasma, vagina, placenta, amniotic fluid, and umbilical cord.[8-10]

Transient bacteremia and hematogenous transmission may occur as a result of the treatment or when the periodontal conditions becomes severe.[11]Thus, periodontal infection remained as a plausible cause for a preterm condition by inducing an inflammatory process with production of cytokines in the placental area.

Pregnant women with findings of elevated amniotic fluid levels of PGE2, IL-6 and IL-8 in the 15–20 weeks of pregnancy and with periodontitis defined by clinical and microbiological parameters are at high risk for premature birth.[11-13]

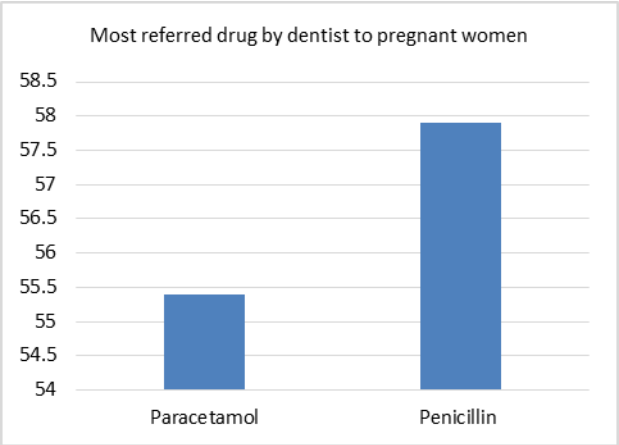
A study by Boggess et al., also determined the relationship between maternal periodontal disease, maternal systemic inflammation, and the development of preeclampsia. The authors found that maternal periodontal disease with systemic inflammation (as measured by C-reactive protein) is associated with an increased risk for pre-eclampsia.[5]

Preeclampsia is defined as elevated blood pressure plus proteinuria with or without pathologic edema after 20 weeks of gestation. A major cause of maternal and prenatal mortality and morbidity is the global incidence of preeclampsia which has been estimated at 5-14% of all pregnancies.[8]

Physicians and dentists can overcome this situation through education, clear communication, and the development of ongoing collaborative relationships. Physicians can share information on the safety of dental treatment in pregnancy with dental colleagues and provide clear referral recommendations. However gynaecologists' agreed that oral screening should be the part of prenatal care, rarely do they refer the pregnant patients to dental care. The previous studies demonstrate that dental care is only indicated in the presence of patient's complaint.[1]

Our study reported that lack of demand for service and time for prenatal oral health counselling created barriers to provide dental care to pregnant patients. Appropriate dental care and prevention during pregnancy may reduce poor prenatal outcomes and decrease infant caries.[1]

Encourage the patient to seek professional dental care when preparing on family way and at least once a trimester during pregnancy. Frequent updating of medical records, consulting with her obstetrician, reinforcing oral hygiene behaviours as preventive measures can reduce the risk of dental emergencies during pregnancy.[2]



CONCLUSION

Oral health professionals require knowledge on pregnancy related education to provide apt care to pregnant patients. Maternal health care professionals can play an essential role in referring pregnant women to the dental care to promote good oral health.

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REFERENCES

1. Amit, Prachi Mital, Nupur Hooja, Premlata Mital, Anuradha Salvi, Andleeb Fatima, Oral and Dental Health Knowledge, Attitude and Practice among Pregnant women , Sch. Acad. J. Biosci., 2(9), 2014, 627-632
2. Sandya Patil, Rachna Thakur, Madhu K, Santhosh T Paul, Prahlad Gadicherla, Oral Health Coalition: Knowledge, Attitude, Practice Behaviours among Gynaecologists and Dental Practitioners , Journal of International Oral Health. Jan-Feb 5(1), 2013, 8-15.
3. RégiaLuzia ZANATA, et. al, PRENATAL DENTAL CARE: EVALUATION OF PROFESSIONAL KNOWLEDGE OF OBSTETRICIANS AND DENTISTS IN THE CITIES OF LONDRINA/PR AND BAURU/ SP, BRAZIL, 2004 , J Appl Oral Sci. 16(3), 2008, 194-200 .
4. Raghad Hashim and Madiha Akbar , Gynecologists' knowledge and attitudes regarding oral health and periodontal disease leading to adverse pregnancy outcomes , https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4304054/
5. Sunali Khanna, Malhotra Shalini, Pregnancy and Oral Health: Forgotten Territory Revisited, J ObstetGynecol India Vol. 60, No. 2 : March / April 2010 pg 123-127 .
6. MohsenShamsi, AlirezaHidarnia, [...], and MahmoodKarimi, Oral health during pregnancy: A study from women with pregnancy, Dent Res J (Isfahan). 2013 May-Jun; 10(3): 409–410. doi: 10.4103/1735-3327.115134 , PMCID: PMC3760370
7. Amare Teshome, Asmare Yitayeh, Relationship between periodontal disease and preterm low birth weight: systematic review, Pan African Medical Journal. 2016; 24:215 doi:10.11604/pamj.2016.24.215.8727
8. PourandokhtAfshari, Shaghayegh Sheinizadeh, Ardeshir Ranjbari, Foroogh khalilinejad, Maternal Periodontitis, Preeclampsia and Adverse Pregnancy Outcomes , J Midwifery Reprod Health. 1(1), 2013, 19-25.
9. R Al-Habashneh SH Aljundi, HA Alwaeli, Survey of medical doctors' attitudes and knowledge of the association between oral health and pregnancy outcomes, Int J Dent Hygiene 6, 2008, 214–220.

10. Bryan S. Michalowicz, D.D.S, et al, Treatment of Periodontal Disease and the Risk of Preterm Birth , n engl j med 355;18 www.nejm.org november 2, 2006 .

11. Y.W. Han, Oral Health and Adverse Pregnancy Outcomes – What's next?, J Dent Res, 90(3), 2011, 289-293.

12. Do¨rtbudak O, Eberhardt R, Ulm M, Persson GR: Periodontitis, a marker of risk in pregnancy for preterm birth. J ClinPeriodontol, 32, 2005, 45–52. doi: 10.1111/ j.1600-051X.2004.00630.x. r Blackwell Munksgaard, 2004.

13. Xiong, a P Buekens, a WD Fraser, b J Beck, c S Off enbacherd, periodontal disease and adverse pregnancy outcomes: a systematic review, RCOG 2006 BJOG An International Journal of Obstetrics and Gynaecology.

14. HUGH SILK, MD, ALAN B. DOUGLASS, MD, JOANNA M. DOUGLASS, BDS, DDS, LAURA SILK, MD, Oral Health during Pregnancy, Am Fam Physician. 77(8), 2008, 1139-1144.

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