

Oral Health during Pregnancy-A Systematic Review

J. Chandrapooja*
B.D.S 1ST year,
Saveetha Dental College,
Chennai, Tamilnadu

R.Gayathri
Assistant Professor,
Department Of Biochemistry,
Saveetha Dental College,
Chennai, Tamilnadu

V.Vishnupriya
Associate Professor,
Department Of Biochemistry,
Saveetha Dental College,
Chennai, Tamilnadu

Abstract

The aim of this systematic review is to study about oral health which is often avoided and misunderstood by physicians, dentists and patients and especially pregnant women. It has been suggested that some oral conditions may have adverse consequences on their children awareness related to oral health during pregnancy should include the importance of proper nutrition to ensure maternal and fetal oral health including taking prenatal vitamins and eating foods rich in proteins, calcium, phosphorous and vitamins A, C and D. There are some prenatal oral health conditions that may have adverse effects on the child. Periodontitis is associated with preterm birth and low birth weight and high levels of cariogenic bacteria in mothers can lead to increased dental caries in the infant. Other oral lesions, such as gingivitis and pregnancy tumours are benign and require only reassurance and monitoring. This review is done to increase the awareness of maintenance of oral health during pregnancy.

INTRODUCTION

The mouth is an obvious portal of entry to the body, and oral health reflects and influences general health and well being. Maternal oral health has significant implications for birth outcomes and infant oral health.[1] Most women do not access oral health care during pregnancy that results in poor oral health that can have an adverse impact on the health of a pregnant woman and her child. In this article brief we see how oral health practices and utilization of dental care among pregnant women may affect a woman's overall health, her birth outcome, and the oral health of her children. We explain how many patient, physician, workforce and financial barriers are limiting utilization of perinatal dental care and conclude with opportunities for health plans to play an important role in removing these barriers to ensure that all pregnant women have access to needed dental care. [2]

Many oral conditions were reported to occur during pregnancy such as gingivitis and periodontal diseases. This can be linked to hormonal changes, problems in seeking dental care during pregnancy and suboptimal oral health practices. Lifestyle habits such as food intake, consumption of sugary snacks and oral health practices with gingival bleeding which is one of the oral problems pregnant women may suffer from. [3] Both periodontal disease and caries in women of childbearing age are highly prevalent, particularly among low-income women and members of racial and ethnic minority groups. [1] Destructive periodontal disease affects up to 15% of the population of childbearing age, with a relatively high proportion of pregnant women demonstrating some degree of periodontal disease. [4]

Maintenance of oral health during pregnancy has been recognized as an important public health issue worldwide. A number of statements and guidelines have been published emphasizing improved oral health care during pregnancy.[5] Hormonal changes in pregnancy combined with neglected oral hygiene tend to increase the incidence of oral diseases like gingivitis.[6] High levels of circulating

progesterone lead to pregnancy gingivitis which is characterized by increased, redness, edema and higher tendency toward bleeding. [7]

CAUSES OF POOR ORAL HEALTH OF PREGNANT WOMEN

Barriers in obtaining dental care including limited access to affordable dental services and lack of awareness about the importance of maternal oral health. [8] There is no published literature on dental health for pregnant women. [9] While the importance and safety of dental care during pregnancy are confirmed, many women do not access dental care during the perinatal period. In the U.S. approximately one in five women do not access dental care during the year before they become pregnant. There is limited national information regarding use of dental services during pregnancy. Overall, most women did not access dental care during pregnancy, and of those who reported having dental problems, one-half did not receive care. For women reporting a dental problem, public insurance for prenatal care and late enrollment in prenatal care were associated with their lower likelihood of accessing care. [2]

EFFECTS OF IMPROPER MAINTENANCE OF ORAL CAVITY

Improper maintenance of oral hygiene leads to plaque. If the plaque isn't removed, it can cause gingivitis – red, swollen, tender gums that are more likely to bleed. So-called "pregnancy gingivitis" affects most pregnant women to some degree, and generally begins to surface as early as the second month. If you already have gingivitis, the condition is likely to worsen during pregnancy. If untreated, gingivitis can lead to periodontitis, a more serious form of gum disease.

Pregnant women are also at risk for developing pregnancy tumors, inflammatory, non-cancerous growths that develop when swollen gums become irritated. Normally, the tumors are left alone and will usually shrink on their own after the baby's birth. But if a tumor is uncomfortable and interferes with chewing, brushing or other oral hygiene procedures,

the dentist may decide to remove it. In addition to this, it has been shown that mothers with poor oral health may be at a greater risk of infecting their children by passing cariogenic bacteria through improper feeding practices. [10]

The physical changes that occur during pregnancy may increase a woman's susceptibility to oral infections, including periodontal disease, and may harm the body's ability to maintain soft tissues in the mouth. Mild inflammation of the gums, or "pregnancy gingivitis" is estimated to affect over 30 percent of pregnant women. Tooth decay may increase during pregnancy due to changes in oral hygiene and diet. Tooth erosion can result from nausea and vomiting that may occur during pregnancy. Oral health also affects pregnancy, contributing to the overall health of the woman, and possibly affecting birth outcomes. Poor oral health in adults is associated chronic diseases such as cardiovascular disease, diabetes and respiratory diseases, all of which may impact a woman's health during pregnancy. [2]

EFFECTS OF POOR ORAL HEALTH OF THE MOTHER ON THE CHILD

Hormonal changes in pregnancy combined with neglected oral hygiene tend to increase the incidence of oral diseases like gingivitis. [11] Research suggests a link between preterm, low-birth weight babies and gingivitis. Excessive bacteria can enter the bloodstream through your gums. If this happens, the bacteria can travel to the uterus, triggering the production of chemicals called prostaglandins, which are suspected to induce premature labor. Poor oral health during pregnancy can lead to perinatal complications, such as low birth weight and preterm delivery as well as poor oral health in children. [12]

PREVENTION

By keeping your teeth clean, especially near the gumline. You should brush with fluoride toothpaste at least twice a day and after each meal when possible. You should also floss thoroughly each day. If brushing causes morning sickness, rinse your mouth with water or with antiplaque and fluoride mouthwashes. Good nutrition – particularly plenty of vitamin C and B12 – help keep the oral cavity healthy and strong. More frequent cleanings from the dentist will help control plaque and prevent gingivitis. Controlling plaque also will reduce gum irritation and decrease the likelihood of pregnancy tumors.

TREATMENT

Some previous studies in this area have suggested that periodontal therapy during pregnancy can lessen the chance of adverse pregnancy outcomes. Also studies suggest that women should not fear any dental intervention during pregnancy; indeed, specialists believe that common treatment during pregnancy is not harmful for pregnant women or the unborn baby. [13] Periodontal treatment during pregnancy may reduce preterm birth and low birth weight incidence. [14]

KNOWLEDGE ABOUT ORAL HYGIENE

Recent datum indicates that approximately 50% of pregnant women do not visit a dentist, even when they perceive a dental need.[15] Results of another recent study conducted in South India revealed that despite the presence of pain due to dental causes, utilization of dental services by pregnant women was poor.[16] Prevention of oral and dental problems and their complications during pregnancy is possible through having pregnant women expressing appropriate knowledge, attitude and practice and seeking dental treatment at right time. Pregnant women need to be educated regarding the possible impact of periodontal diseases on pregnancy outcomes, dental disease prevention and treatment options. Studies among pregnant women with reference to their knowledge regarding oral hygiene and practices toward oral health have been recently reported from other countries, [17] but there is dearth of literature from the Indian subcontinent in this regard. Therefore, this study was carried out to assess knowledge and awareness regarding oral health during pregnancy among pregnant women in India.

CONCLUSION

The oral health of pregnant women can be improved by daily brushing and intake of the recommended number of food servings. These practices can be promoted by dentists and implemented by the pregnant women themselves and their reinforcement by all health care professionals is recommended. Achieving good oral health during pregnancy is crucial to the lifelong health of mothers and their children. Health care providers treating pregnant women can play a vital role in promoting good oral health by educating women about the importance of oral health and helping to connect them to dental care. Good oral health during pregnancy can not only improve the health of the pregnant mother, but also potentially the health of her child. The present review showed that pregnant women's knowledge and awareness regarding oral health was poor as displayed from the results. Most of the women were unaware of the potential consequences of neglecting oral hygiene during pregnancy. Pregnancy is a "teachable" moment when women are motivated to adopt healthy behavior.

REFERENCE

- [1] Oral Health in Women During Preconception and Pregnancy: Implications for Birth Outcomes and Infant Oral Health, Kim A. Boggess corresponding author1 and Burton L. Edelstein2. *Matern Child Health J.* 2006 Sep; 10(Suppl 1): 169–174.
- [2] Improving Access to Perinatal, Oral Health Care: Strategies & Considerations for Health Plans, Issue Brief July 2010, NIHCM foundation.
- [3] Food intake, oral hygiene and gingival bleeding in pregnancy: does lifestyle make a difference? A cross sectional exploratory study. Gaffar BO, El Tantawi MM, AlAgl AS, Al-Ansari A. *Int J Health Sci (Qassim).* 2016 Jan;10(1):13-20.
- [4] Offenbacher S, Katz V, Fertik G, Collins J, Boyd D, Maynor G, et al. Periodontal infection as a possible risk factor for preterm low birth weight. *J Periodontol.* 1996;67:1103–13. [PubMed]
- [5] Buerlein J, Peabody H, Santoro K. NIHCM Foundation Improving Access to Perinatal Oral Health Care: Strategies and Considerations for Health Plans: Issue Brief July 2010 National Institute for Health Care Management. [Last accessed on 2014 Dec 01].

- [6] Cengiz SB. The pregnant patient: Considerations for dental management and drug use. *Quintessence Int.* 2007;38:e133–42. [PubMed]
- [7] George A, Shamim S, Johnson M, Ajwani S, Bhole S, Blinkhorn A, et al. Periodontal treatment during pregnancy and birth outcomes: A meta-analysis of randomised trials. *Int J Evid Based Healthc.* 2011;9:122–47. [PubMed]
- [8] The oral health status, practices and knowledge of pregnant women in south-western Sydney. George A1, Johnson M, Blinkhorn A, Ajwani S, Bhole S, Yeo AE, Ellis S.
- [9] Knowledge, Attitude and Practice of Oral and Dental Healthcare in Pregnant Women Sunita Bamanikar1,* and Liew Kok Kee2[PubMed]
- [10] Cucó G, Fernández-Ballart J, Sala J, Viladrich C, Iranzo R, Vila J, et al. Dietary patterns and associated lifestyles in preconception, pregnancy and postpartum. *Eur J Clin Nutr.* 2006;60:364–71. [PubMed]
- [11] Cengiz SB. The pregnant patient: Considerations for dental management and drug use. *Quintessence Int.* 2007;38:e133–42. [PubMed]
- [12] Silk H, Douglass AB, Douglass JM, Silk L. Oral health during pregnancy. *Am Fam Physician.* 2008;77:1139–44. [PubMed]
- [13] American Academy of Periodontology 2010; Baby steps to a healthy pregnancy and on time delivery. [Online] Available from: <http://www.perio.org/consumer/pregnancy.htm#4> [Accessed 2 August 2010]
- [14] Periodontal treatment during pregnancy and birth outcomes: a meta-analysis of randomised trials. George A1, Shamim S, Johnson M, Ajwani S, Bhole S, Blinkhorn A, Ellis S, Andrews K.[PubMed]
- [15] Hwang SS, Smith VC, McCormick MC, Barfield WD. Racial/ethnic disparities in maternal oral health experiences in 10 states, pregnancy risk assessment monitoring system, 2004-2006. *Matern Child Health J.* 2011;15:722–9. [PubMed]
- [16] Shenoy R, Chacko V. Utilization of dental services due to dental pain by pregnant women in India: A qualitative analysis. *J Interdiscip Dent.* 2013;3:18–20.
- [17] Bamanikar S, Kee LK. Knowledge, attitude and practice of oral and dental healthcare in pregnant women. *Oman Med J.* 2013;28:288–91. [PMC free article] [PubMed]