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Faculty of Basic Medical Science

Dental Care During Pregnancy

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Abstract:

Oral health is essential to overall health in the prenatal period. . Several studies have shown an association between periodontal disease and poor pregnancy outcomes including preterm birth. Maintaining good oral health may have a positive effect on cardiovascular disease, diabetes, and other disorders To potentiate general health and well-being, women should routinely be counseled about the maintenance of good oral health habits throughout their lives as well as the safety and importance of oral health care during pregnancy

Introduction :

Pregnancy is a unique period during a woman's life and is characterized by complex physiological changes, which may adversely affect oral health. At the same time, oral health is key to overall health and well being. Preventive, diagnostic, and restorative dental treatment is safe throughout pregnancy and is effective in improving and maintaining oral health. However, health professionals often do not provide oral health care to pregnant women. At the same time, pregnant women, including some with obvious signs of oral disease, often do not seek or receive care. In many cases, neither pregnant women nor health professionals understand that oral health care is an important component of a healthy pregnancy., women in poor dental health readily transmit the tooth decay pathogen *Streptococcus mutans* from their saliva to their infants resulting in increased risk of early childhood caries. Preventive services and treatment for acute problems should be recommended, fears allayed, and women referred .Dental x-rays may be performed safely with the use of appropriate shielding. Non-emergent interventions are best provided between 14 and 20 weeks of gestation for comfort and optimal fetal safety.

Why Is Dental Care Advisable ?

Preventive services and therapeutic interventions to arrest tooth decay and alleviate periodontal disease improve the oral health and the overall health of the pregnant woman. Oral problems specific to pregnancy can also be addressed during dental care. In addition, improved maternal oral health decreases the risk of early childhood caries in offspring.

Tooth Decay

Preventing and arresting tooth decay (cavities), a product of acid demineralization of the teeth in the bacterial disease dental caries, is an important goal of dental care. Dental caries remains a prevalent disease in the United States, particularly among vulnerable populations such as racial and ethnic minorities.⁸ Among pregnant women, changes in eating habits, specifically in the frequency and types of food consumed, and in oral hygiene can exacerbate dental caries and increase the risk of new tooth decay. The organisms that cause tooth decay are acidogenic, and increases in carbohydrates select for such organisms in the biofilm on the teeth. Women who crave carbohydrate rich food during pregnancy are particularly at risk.⁹ Frequent vomiting, which is common in pregnancy, can contribute to an acidic environment leading to growth of

dental caries pathogens as well as acid demineralization of the tooth enamel. Pregnant women should be encouraged to rinse their mouths with water and use over-the-counter fluoride mouth rinses after vomiting to remove and counteract the effects of stomach acids in the mouth. Tooth decay is not self-limiting. Left untreated, cavities can result in dent alveolar and head and neck abscesses and cellulites which can be life threatening ⁽¹⁾.

Periodontal Diseases

Periodontal diseases are bacterial infections of the gums and bone surrounding the teeth characterized by acute and chronic inflammatory changes and loss of bone support for the teeth. Periodontal infections can be supportive and painful, or more often, are relatively silent. Changes may occur rapidly over months or progress more slowly. Periodontal diseases of a serious nature are rare among young adults affecting approximately 1% of people 18 to 34 years old, and it is unlikely that pregnancy per se exacerbates pre-existing disease. Primary risk factors for serious periodontal infection are smoking and diabetes. Several studies have suggested an association between periodontal disease and adverse pregnancy outcomes including preterm birth or low birth weight, gestational diabetes, preeclampsia small for gestational age infants, and stillbirth⁽²⁾.

Dental Conditions Common During Pregnancy

Bleeding and tender gums, including gingivitis, are common dental problems reported by pregnant women. These conditions usually reflect tissue responses to increased levels of progesterone and estrogen and are largely preventable if good oral hygiene is maintained throughout pregnancy. Recommendations include daily brushing and flossing and scheduled prophylactic cleanings performed by a dental professional⁽³⁾.

Oral Health of Infants and Young Children

Poor oral health of mothers leads to poor oral health of children.²⁶ Women in poor dental health have high amounts of *Streptococcus mutans* in their saliva that can be transmitted readily to their infants through common parenting behaviors such as sharing a spoon or bites of food, or licking a pacifier. Bacteria present in the mother increase the chance of colonization of the infant and consequently the caries (tooth decay) process. Infection occurs soon after birth, and the infant's teeth are colonized as they erupt during the first and second years of life. Dental care during pregnancy can benefit both mother and child by eliminating this source of *S. mutans* transmission and providing anticipatory guidance about infant oral health and how to prevent early childhood caries. Special consideration should be given to pregnant adolescents as a combination of strategies to provide guidance and promote oral health change may be necessary⁽⁴⁾.

Dental Services Provided To Pregnant Women

Preventive services and treatment for acute dental infections should be provided as early in pregnancy as possible. Diagnosis, including x-rays, and needed dental treatment can be provided safely at any gestational age.^{29,32,33} However, many health care professionals regard the period from 14 to 20 weeks of gestation as the optimal time to perform non-emergent procedures. Fetal organogenesis has been completed by this time, and the chance for spontaneous abortion is lower than in the first trimester. This is also the most comfortable time for many women, once nausea and vomiting have subsided and women's energy has returned. The uterus is below the umbilicus until 20 weeks' gestation allowing for comfortable and easy positioning in a dental treatment chair. During the third trimester, modifications in positioning are particularly important to avoid the supine position in which uterine compression of the inferior vena cava causes decreased venous return and hypotension, nausea, and vomiting. Emergency services can and should be provided at any time⁽⁵⁾

Conclusion:

The childbearing year, including the preconception period, provides an opportunity for preventive dental health care to improve the health of a mother and subsequently her infant. Midwives and other women's health clinicians play an important role in recommending pregnant women receive dental care and making referrals. Greater awareness of the importance of oral health in pregnancy among clinicians, women, and dental care specialists, can have a significant impact on improving overall health of women and their families.

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