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WOMEN'S ORAL HEALTH DURING PREGNANCY

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ABSTRACT

Pregnancy, one of the most important milestones of a women's life, is characterized by complex physiological changes which tend to adversely affect the oral health. Maintenance of good oral health during pregnancy is of paramount importance, owing to its possible complications with neglect. Potential risks of poor oral health and necessary precautions pertaining to dental treatment during pregnancy are outlined below.

KEYWORDS :

INTRODUCTION

Pregnancy is one of the most important milestones in the life of Women worldwide. It is a unique period during a women's life, characterized by complex physiological changes which may adversely affect oral health, which is key to overall health and well-being. Multiple studies have shown association between periodontal disease and adverse pregnancy outcomes, such as premature delivery and low birth weights.

Oral health care during pregnancy is a big part of effective prenatal care. However, it is often less understood and neglected by expectant mothers and health care professionals alike. Pregnancy itself should not be a reason to deter dental treatment. The ADA and American Pregnancy association recommend that diagnostic x-rays, endodontic treatment, periodontal treatment, restoration, extraction etc are safest during 2nd trimester and first half of 3rd trimester. Dental emergencies can be dealt with, at any time during pregnancy.

Good oral hygiene practice and timely dental treatment is important for the following reasons:[1-3]

1. Hormone changes during pregnancy increase the risk of oral diseases esp. periodontal diseases.
2. Possible association between periodontal disease and risk of adverse pregnancy outcomes, such as pre-term delivery and low birth weights. Preeclampsia may also be caused by periodontal disease.[3]
3. Bacteria causative of dental caries can easily transmit from mother to infant.
4. Gingivitis and pregnancy tumors are benign and need only monitoring, reassurance and symptomatic relief as needed.

Apart from routine oral health measures, certain medical conditions co-existing during pregnancy need special mention and due attention:[1-6]

1. Hypertensive disorders during pregnancy – preexisting hypertension and preeclampsia occur in 12 – 22% of pregnant women. Clinician must be aware of increased risk of bleeding during dental procedures. Pre-treatment consultation must be sought from treating gynecologist in cases of severe / uncontrolled hypertension (BP ≥ 160/110mm Hg)

2. Diabetes and Pregnancy – gestational diabetes occurs in 2 – 5% of pregnant women. It usually presents after 24 weeks of gestation. Any dental inflammation can make diabetes control more difficult and vice versa. Poor diabetes control could lead to adverse outcomes such as preeclampsia, congenital anomalies, large-for gestational age newborns. Apt control of all source of inflammation is necessary for proper control of diabetes during pregnancy.

3. Heparin and Pregnancy – A small number of pregnant women, diagnosed with thrombopenia may be receiving daily dose of heparin, to improve pregnancy outcome. Heparin increases risk of bleeding during dental procedures. Pre-treatment consultation with the gynecologist is essential.

4. Risk of Aspiration and Positioning during Pregnancy – Pregnant women have delayed gastric emptying and are considered to always have a full stomach. Supine patient position should be avoided for any dental treatment. It poses the risk of development of 'supine hypertensive syndrome', dyspepsia from gastro-oesophageal reflux, risk of development of DVT etc.[5,6]

American Academy of Pediatric Dentistry (AAP) issues new oral health guidelines for pregnant women in 2009. According to the guidelines:

1. **Oral Health Education** – Counseling of expectant mothers and early intervention to prevent progression of disease.
2. **Oral hygiene** – Routine monitoring for removal of plaque and calculus should be done. Promote correct brushing and flossing of teeth.
3. **Fluoride** – ADA recommends use of fluoridated tooth paste over the age of 6. Use of fluoride paste and mouth rinse during pregnancy is advocated by AAP.
4. **Nutrition** – Educate regarding proper diet and nutrition to limit sugar intake and inhibit plaque buildup.
5. **Treat existing tooth decay** – Treatment of existing tooth decay is completely safe during pregnancy which also improves overall health by removing oral bacteria.
6. **Transmission of bacteria** – Discourage sharing of foods and utensils.
7. **Use of Xylitol gum** – Chewing Xylitol gum (4 times a day) may reduce rate of tooth decay in child.

DENTAL TREATMENT CONSIDERATIONS during pregnancy:[7,8]

1. Ideal Timing of Dental Treatment – it is advisable to defer all elective procedures during first trimester because of potential vulnerability of the fetus. Second trimester is the safest time for routine dental care. At this time treatment may be planned, to eliminate potential problems that could arise later in pregnancy or during immediate post-partum period. Early part of third trimester, may also be considered for routine procedures if required. Extensive and complex procedures are best deferred until after delivery.

2. Dental Chair & Patient position – Supine position may cause the fetus to occlude the blood supply from returning to the heart leading to loss of consciousness. The ideal position of the pregnant patient in the dental chair is the left lateral decubitus position with the right buttock and hip elevated by 15^0.

3. Dental Radiographs – Dental X-ray should be avoided during pregnancy. If absolutely inevitable, dose of radiation and time of gestation must be considered. Numerous studies and data support that exposure less than 0.05 to 0.1 Gy during pregnancy does not

increase risk of congenital anomalies. The radiation in dental radiograph is way below the threshold dose. Dental radiograph may optimally be taken in the second trimester and with the proper use of lead apron.

4. Amalgam restorations – Their use is controversial because of mercury release, which is known to cause congenital malformations. However since there is no clear evidence linking / refuting amalgam with birth defects or stillbirths, it is advisable to approach placement/removal of amalgam restoration during pregnancy with all precaution.

5. Periodontal considerations – Increased levels of circulating progesterone and its effects on microvasculature resulting in noticeable gingival change has been reported during pregnancy, from second month, reaching a maximum in the eighth month. Other factors include: educational level, previous periodontal maintenance, folate deficiency during pregnancy. Specific complications include worsening of preexisting gingivitis and development of localized swellings (pregnancy epulis). Maternal periodontal health has been related to low birth weight and pre-term delivery.

6. Prenatal Oral health counseling – Steptococcus mutans has been found in early childhood caries, which are thought to be transmitted from mother to child. In order to prevent this, it has been encouraged to use chlorhexidine varnish and Xylitol gum after delivery.

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