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Short Communication

Dental care practices in pregnancy: Periodontist's perspectives

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1. Introduction

Pregnancy is a very significant phase during the lifespan of a woman. It's a very dynamic phase of life that has an impact on the nutritional, physiologic, hormonal, digestive, cardiovascular, skeletal, genitourinary and hematologic systems of the body.[1] The body evolves and adapts to nourish and protect the growing fetus. With better awareness among women and improved government strategies to take care of maternal health, there is access to better health services that have incredibly improved our maternal and infant mortality and morbidity rates. But Still, various myths and practices discourage a pregnant woman from maintaining good oral health.[2]

Elevated levels of circulating hormones like estrogen and progesterone influence the hard and soft tissues of the oral cavity. In a pregnant woman, in the presence of minimal local deposits like plaque and calculus, there is an exaggerated response to inflammation that sometimes manifests as pregnancy gingivitis, worsening of the pre-existing periodontal conditions, localized inflammatory enlargements manifested as pregnancy tumour, increased incidences of dental caries due to dietary and gastric changes.

2. Pregnancy & Periodontitis: Association

There is enough scientific literature which suggests that good oral health has its role in preventing adverse pregnancy outcomes like delivery of preterm or low birth weight babies, spontaneous abortions, pre-eclampsia and gestational diabetes.[3] The mechanism is through the transfer of the periodontal pathogens and their toxins through the hematogenous route to generate an immune response in the fetoplacental membranes and fluids causing adverse outcomes. Also, the elevated levels of proinflammatory mediators during periodontitis generate cytokines (IL-6) and acute phase proteins (C-reactive proteins) which have detrimental effects on pregnancy outcomes. Here arises the role of the obstetrician who should refer the pregnant woman to the dentist for regular dental examination and timely management of the dental concerns.

3. Management

There are certain reservations about the management of a pregnant patient in dental settings. No treatment is contraindicated during pregnancy. However, the management involves timely care and adequate handling of the patient's symptoms. Pregnancy can be divided into three phases in terms of trimesters spanning three months each. During the first trimester, organogenesis happens, so the growing fetus is highly susceptible to the effects of teratogens leading to spontaneous abortions. From a dental

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treatment point of view, the second trimester is the safest for carrying out the various treatments.[4] During the third trimester, the size of the growing fetus is big enough that it impinges upon the inferior vena cava, aorta and femoral vessels leading to syncopal episodes in pregnant patients in a supine posture.

The following considerations should be followed while managing a pregnant patient in a dental operatory:

1. Oral health counselling: A pregnant woman should be counselled about the importance of good oral health and its impact on the growing fetus and pregnancy outcomes.
2. Oral hygiene maintenance: Patients should be informed about the impact of hormonal variations on gingival tissues. Twice daily toothbrushing with a fluoridated dentrifice is recommended. Use of necessary interdental aid like dental floss or an interdental toothbrush, where indicated, should be suggested.
3. Oral hygiene instructions and plaque control should be reinforced during all the phases of pregnancy.
4. Regular dental checkups should be planned so that early management can be planned during safe periods.
5. Active dental infections should be controlled whenever encountered.
6. Warm saline rinses should be recommended for optimum gingival health.
7. Unless it is an emergency, unnecessary interventions should be avoided during the first trimester
8. The second trimester is the safest phase to plan various routine and elective dental procedures, like restorations, oral prophylaxis, endodontic treatments, extractions etc.
9. Routine procedures should not be postponed to later phases when elective and complicated procedures are not advisable.
10. Necessary treatments can be planned during the early part of the third trimester. Elective dental procedures should be avoided during the third trimester. During the treatment, the posture of the patient should be modified, the patient may be positioned slightly on her left, the right hip can be elevated 10-15 cm or the patient can be asked to tilt 5-15% on her left side, the head of the chair can be made little upright to avoid compression over the major vessels.
11. Irrespective of the phase of pregnancy, unnecessary radiographs should be avoided during pregnancy. X-rays are ionizing electromagnetic radiations and may cause birth defects and miscarriages. Proper shielding by using lead aprons, thyroid collars, and properly collimated beams should always be used in a pregnant patient when radiographs are necessary.
12. The patient's obstetrician should be consulted whenever any elective procedure is planned. Unnecessary medications should be avoided during pregnancy. Drugs should not be prescribed during the first trimester. After noting down the known drug allergies, the safest analgesic recommended during pregnancy is Acetaminophen.[5] Ibuprofen can also be prescribed in cases of acute dental pain but it is not recommended during the third trimester. For orofacial infections, the recommended antibiotics are Amoxicillin, Penicillins, Cephalexin, and Erythromycin. Metronidazole is not recommended during the first trimester and Tetracyclines cause dental staining.
13. With the proper method of injection and adequate aspiration, local anaesthetics (lidocaine, Prilocaine) can be used with the correct dosage and proper precautions. The use of epinephrine as available in dental anaesthetic solutions when used in the correct dosage and method is considered safe.
14. Elective procedures like the excision of pregnancy tumours should be planned during the second trimester. They should not be left untreated once noticed. If they are not managed timely, they increase in size and cause difficulty in mastication, worsening of existing periodontal state, tooth displacement (if they increase in size), and bleeding. After parturition, the mother gets busy with the care and feeding of the new born and would further ignore her dental needs.
15. The myths related to brushing during pregnancy should be abolished and the patient should be rather educated about the effects of poor oral hygiene.

4. Conclusion

At present when we have sufficient evidence of the role of good oral health for a safe and smooth pregnancy, it's the need of the hour that pregnant women should be referred to dentists for counselling and management. They should not only report when the tooth hurts but dental care should be a part of the complete maternal care program.

Similarly, dental operators should not consider pregnancy a deterrent to the optimal oral care to a patient. Pregnancy is a physiologic state; it is not a contraindication to dental management. So dentists should counsel, educate and comprehensively plan a pregnant woman's treatment plan for complete maternal care.

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6. Conflict of Interest

None.

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