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THERAPEUTIC DENTISTRY IN PREGNANT WOMEN: CLINICAL FEATURES, PREVENTION AND TREATMENT APPROACHES

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Introduction

Pregnancy is a unique physiological condition characterized by significant hormonal, metabolic, and immunological changes that affect the entire body, including the oral cavity. These changes can increase the susceptibility of pregnant women to various dental diseases, particularly dental caries, gingivitis, and periodontal disorders. According to numerous studies, the prevalence of oral diseases during pregnancy remains high, despite advances in preventive dentistry and increased awareness of oral health.

Hormonal fluctuations, especially increased levels of estrogen and progesterone, influence vascular permeability, inflammatory response, and saliva composition, which may lead to changes in the condition of hard dental tissues and periodontal structures. In addition, pregnancy-related factors such as nausea, vomiting, altered dietary habits, and decreased oral hygiene contribute to the progression of dental pathology.

Therapeutic dentistry plays a crucial role in maintaining oral health during pregnancy, as untreated dental diseases may negatively affect both maternal and fetal health. Recent evidence suggests a possible association between periodontal disease and adverse pregnancy outcomes, including preterm birth and low birth weight. Therefore, timely diagnosis, prevention, and safe treatment of dental diseases during pregnancy are of great clinical importance.

The purpose of this work is to analyze the main clinical features of dental diseases in pregnant women and to evaluate modern preventive and therapeutic approaches used in therapeutic dentistry during pregnancy.

Materials and Methods

This study is based on an analysis of current scientific literature published in international peer-reviewed journals indexed in databases such as PubMed, Scopus, and Google Scholar. Articles published in the last 10–15 years were selected using keywords including pregnancy, therapeutic dentistry, oral health, dental caries, gingivitis, and periodontal disease.

The materials included clinical studies, systematic reviews, and guidelines from international dental and obstetric organizations. Special attention was paid to publications focusing on the safety and effectiveness of preventive and therapeutic dental procedures during pregnancy.

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The analysis considered the influence of pregnancy on oral tissues, the prevalence of common dental diseases, and the recommended treatment strategies depending on the trimester of pregnancy. Emphasis was placed on non-invasive and minimally invasive methods, preventive measures, and the use of safe dental materials and medications.

Results and Discussion

Physiological changes during pregnancy significantly affect the oral cavity. Increased estrogen and progesterone levels lead to enhanced blood supply to gingival tissues, which may result in gingival edema, bleeding, and an exaggerated inflammatory response to dental plaque. This condition, commonly referred to as pregnancy gingivitis, is one of the most frequently observed oral pathologies in pregnant women. Salivary changes during pregnancy include decreased buffering capacity and alterations in pH, which create favorable conditions for enamel demineralization and caries development. Frequent vomiting associated with early pregnancy can further contribute to enamel erosion due to repeated exposure to gastric acids.

Dental caries in pregnant women often progresses rapidly, particularly in the presence of poor oral hygiene and increased carbohydrate intake. Preventive measures, including professional oral hygiene, fluoride application, and patient education, are essential components of therapeutic dentistry during pregnancy.

The second trimester is considered the safest period for most dental procedures. During this time, conservative treatment of caries, professional cleaning, and remineralizing therapy can be effectively performed. Local anesthetics without vasoconstrictors or with minimal concentrations of epinephrine are generally considered safe when used appropriately. Remineralizing agents containing calcium, phosphate, and fluoride play a significant role in the prevention and treatment of early carious lesions. These therapies help restore mineral balance in enamel and reduce tooth sensitivity without posing risks to the developing fetus.

It is essential to avoid unnecessary radiographic examinations during pregnancy; however, if radiographs are required, appropriate protective measures such as lead aprons and thyroid collars should be used. The selection of dental materials must be guided by safety considerations, favoring biocompatible and well-studied products. Close collaboration between dentists and obstetricians is crucial to ensure comprehensive care for pregnant patients. Individualized treatment planning, taking into account the gestational age and general health status of the patient, is the cornerstone of effective therapeutic dental care during pregnancy.

Conclusion

Therapeutic dentistry plays a vital role in maintaining oral and overall health in pregnant women. Physiological changes during pregnancy increase the risk of dental caries and inflammatory periodontal diseases, necessitating special attention from dental professionals.

Preventive strategies, early diagnosis, and the use of safe, minimally invasive treatment methods are essential for effective dental care during pregnancy. Remineralizing therapy, professional oral hygiene, and patient education significantly reduce the risk of disease progression and complications.

Timely and appropriate dental treatment not only improves the quality of life of pregnant women but may also contribute to better pregnancy outcomes. Therefore, therapeutic dental care should be considered an integral part of prenatal healthcare.

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