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## EVALUATION AND CLINICAL COURSE OF DENTAL DISEASES IN PREGNANT WOMEN LIVING IN RURAL AREAS

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### **Abstract**

In recent years, there has been a significant increase in the incidence of dental diseases among pregnant women, especially in rural areas of Uzbekistan. According to research, up to 60% of pregnant women in Uzbekistan suffer from various dental problems, such as gingivitis, periodontitis, and dental caries, which significantly reduces their quality of life and can lead to serious obstetric complications, including premature birth and low birth weight. The significance of this problem is particularly acute in rural areas, where access to qualified dental care remains extremely limited.

**Aim.** Based on a comprehensive analysis of the dental health of pregnant women in rural areas of Uzbekistan, to develop methods for the primary prevention and treatment of dental diseases aimed at reducing the incidence of complications and improving pregnancy outcomes.

**Materials and methods.** To obtain comprehensive information on socio-demographic characteristics, lifestyle, hygiene habits, dietary characteristics, as well as the availability and frequency of dental care, a survey will be conducted among all study participants.

**Results** The study examined the dental health characteristics of pregnant women living in rural areas, with an emphasis on the influence of various factors such as access to health services, dietary habits, and living conditions.

**Conclusion.** Upon completion of the work, it is planned to develop and implement into practical activities methodological recommendations aimed at the prevention and treatment of dental diseases in pregnant women living in rural areas.

**Keywords:** pregnant women, gingivitis, periodontitis, caries, oral cavity

# **ОЦЕНКА И КЛИНИЧЕСКОЕ ТЕЧЕНИЕ СТОМАТОЛОГИЧЕСКИХ ЗАБОЛЕВАНИЙ БЕРЕМЕННЫХ ЖЕНЩИН ПРОЖИВАЮЩИХ В СЕЛЬСКИХ РАЙОНАХ**

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## **Аннотация.**

В последние годы наблюдается значительное увеличение числа случаев стоматологических заболеваний среди беременных женщин, особенно в сельских районах Узбекистана. Согласно данным исследований, до 60% беременных женщин в Узбекистане страдают от различных стоматологических проблем, таких как гингивит, периодонтит и кариес, что существенно снижает их качество жизни и может приводить к серьезным акушерским осложнениям, включая преждевременные роды и низкий вес новорожденных. Значимость этой проблемы особенно актуальна в сельских районах, где доступ к квалифицированной стоматологической помощи остается крайне ограниченным.

**Цель исследования.** На основании комплексного анализа стоматологического здоровья беременных женщин в сельских районах Узбекистана разработать пути первичной профилактики и лечения стоматологических заболеваний, направленный на снижение частоты осложнений и улучшения исходов беременности.

**Материалы и методы.** Для получения исчерпывающей информации о социально-демографических характеристиках, образе жизни, гигиенических привычках, диетических особенностях, а также доступности и частоте получения стоматологической помощи, будет проведено анкетирование всех участниц исследования.

**Результаты.** Изучены особенности стоматологического здоровья беременных женщин, проживающих в сельских районах, с акцентом на влияние различных факторов, таких как доступность медицинских услуг, диетические привычки и условия жизни.

**Заключение.** В исследовании изучались характеристики здоровья зубов беременных женщин, проживающих в сельской местности, с акцентом на влияние различных факторов, таких как доступ к медицинским услугам, пищевые привычки и условия жизни.

**Ключевые слова:** беременные женщины, гингивит, пародонтит, кариес, полость рта

## **Introduction**

In recent years, there has been a significant increase in the incidence of dental diseases among pregnant women, especially in rural areas of Uzbekistan. According to research, up to 60% of pregnant women in Uzbekistan suffer from various dental problems, such as gingivitis, periodontitis, and dental caries, which significantly reduces their quality of life and can lead to serious obstetric complications, including premature birth and low birth weight. The significance of this problem is particularly acute in rural areas, where access to qualified dental care remains extremely limited. Most women are unable to visit a dentist regularly due to the remoteness of medical facilities. Lack of awareness about the importance of dental health during pregnancy, as well as financial constraints, can lead to oral health problems that often go untreated, progress, and can lead to serious complications for both mother and child.

Despite a number of studies, the mechanisms of development and progression of dental diseases during pregnancy remain poorly understood. Currently, there is no unified concept of the pathogenetic processes underlying these diseases in pregnant women, this leads to an empirical approach to their treatment and prevention. This creates significant difficulties in choosing optimal methods of prevention and treatment, which, in turn, leads to a high rate of complications and relapses. Therefore, studying the dental health of pregnant women in rural areas of Uzbekistan and developing effective prevention and treatment methods are a priority for modern medicine. This requires in-depth and comprehensive research, aimed at understanding the pathogenesis of oral diseases in this population group, as well as creating integrated programs that contribute to improving the dental health of pregnant women in Uzbekistan.

## **The aim of**

Based on a comprehensive analysis of the dental health of pregnant women in rural areas of Uzbekistan, to develop methods for the primary prevention and treatment of dental diseases aimed at reducing the incidence of complications and improving pregnancy outcomes.

## **Materials and Methods**

To obtain comprehensive information on socio-demographic characteristics, lifestyle, hygiene habits, dietary characteristics, as well as the availability and frequency of dental care, a survey will be conducted among all study participants. The questionnaires will be specifically designed to take into account the

characteristics of life in rural areas, which will allow for a more accurate assessment of the impact of these factors on dental health.

A detailed clinical examination of the oral cavity will be carried out in all pregnant women included in the study to identify and classify dental diseases such as gingivitis, periodontitis and caries. The dental health assessment will be conducted taking into account the trimester of pregnancy, the number of previous pregnancies and the characteristics of the current health condition.

To analyze the microbiological composition of the oral cavity, the polymerase chain reaction (PCR) method will be used, which will allow us to identify the presence and concentration of pathogenic microorganisms associated with the development of dental diseases. The study of microbiome changes will be conducted during pregnancy, which will help identify critical periods for the development of dental pathologies.

Using microbiological and biochemical methods, a study will be conducted to assess the state of normal microflora and local resistance factors in the oral cavity, including analysis of secretory immunoglobulin A (sIgA) and other biomarkers of local immunity. These data will allow us to evaluate the protective functions of the oral cavity in pregnant women and their changes depending on the trimester of pregnancy.

Statistical analysis of the collected data will be conducted to identify correlations between the dental health of pregnant women and variables such as age, number of previous pregnancies, socioeconomic status and lifestyle. This will make it possible to identify key factors influencing the development of dental diseases and use them to develop preventive measures.

Based on the study results, recommendations will be developed for the prevention of dental diseases in pregnant women living in rural areas. The program will include measures to improve hygiene practices, diet, and recommendations for increasing the availability and quality of dental care. The research methodology will be based on the use of modern statistical methods of data analysis, including correlation and regression analysis, to identify significant factors influencing dental health.

Statistica 6.0 (Statsoft, USA) software will be used for data processing and analysis. The significance of differences between quantitative indicators will be determined using the Student's t-test for normally distributed data and the nonparametric Mann-Whitney test for non-normally distributed data.

## **Results**

The study examined the dental health characteristics of pregnant women living in rural areas, with an emphasis on the influence of various factors such as access to health services, dietary habits and living conditions.

The composition of the oral microbiome in pregnant women was studied over the course of each trimester, which will allow us to identify patterns of microflora changes and their relationship with the development of dental diseases.

Correlations between dental health and socioeconomic factors will be studied to help identify key risks and develop effective preventive measures.

An approach to predicting the risk of developing dental diseases in pregnant women will be developed based on an analysis of risk factors identified during the study.

The effectiveness of various preventive measures and approaches adapted for pregnant women in rural areas will be studied with a view to their subsequent implementation into the prenatal health care system.

A set of preventive and therapeutic measures will be developed to improve the dental health of pregnant women living in rural areas, taking into account their specific needs and living conditions.

### **Discussion**

The present study demonstrates that changes in the microbiome will be carried out in the dynamics of pregnancy, which will help to identify critical periods for the occurrence of dental pathologies.

The program will include measures to improve hygiene practices, diet, and recommendations to increase the availability and quality of dental care.

The research methodology will be based on the use of modern statistical methods of data analysis, including correlation and regression analysis, to identify significant factors influencing dental health.

### **Conclusion**

Thus, the subject of the study is a comprehensive assessment of the dental health of pregnant women under the influence of alcohol, with the definition of the goal and analysis of key risk factors influencing the development of dental diseases. Upon completion of the work, it is planned to develop and implement into practical activities methodological recommendations aimed at the prevention and treatment of dental diseases in pregnant women living in rural areas. These recommendations will be adapted to the operating conditions of medical institutions in rural areas, taking into account the specifics of the region and the availability of medical services.

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