MEDICO-EPIDEMIOLOGICAL CHARACTERISTICS OF ORAL DISEASES IN PATIENTS WITH TYPE 2 DIABETES MELLITUS

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Abstract:
Type 2 diabetes mellitus (T2DM) is a persistent metabolic disorder that is frequently associated with a wide range of oral health complications. This study presents the results of a clinical and epidemiological analysis involving 146 participants, including 126 patients diagnosed with T2DM and 20 conditionally healthy individuals. The study investigates oral hygiene status, the structure of dental care, frequency of dental visits, and socio-demographic factors influencing oral health among individuals with T2DM.

Keywords: Type 2 diabetes, oral diseases, oral hygiene, epidemiology, prevention.

Introduction:
Type 2 diabetes mellitus is recognized as one of the most prevalent chronic diseases of the 21st century. While its systemic complications—such as neuropathy, nephropathy, and angiopathy—have been extensively studied, the oral health implications of T2DM have long remained underexplored. Recent research indicates a high prevalence of dental problems among T2DM patients. Periodontitis is even considered a potential "sixth complication" of diabetes. Epidemiological studies confirm that individuals with T2DM are 2 to 4 times more likely to suffer from inflammatory diseases of the gingiva and oral mucosa compared to non-diabetic individuals.

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Materials and Methods:

The study was conducted between 2022 and 2024 at dental institutions in the city of Bukhara. A total of 146 individuals were examined and categorized into three groups: 62 patients with T2DM receiving active dental treatment (main group), 64 patients with T2DM who were not undergoing treatment (comparison group), and 20 conditionally healthy individuals (control group). Participants were aged between 20 and 60 years.

The following parameters were assessed: oral hygiene status using the OHI-S index, types and frequency of dental interventions over the past two years, frequency of dental visits, place of residence, social status, and the level of glycated hemoglobin (HbA1c).

Results:

The majority of participants were aged 40–49 years (37%), with no statistically significant age differences between groups. Women accounted for 56.8% of the sample, and men 43.2%. Most participants (80.8%) lived in urban areas, with no significant differences between the groups in terms of residence (p > 0.05).Regarding employment status, 61% were employed, 32.2% were unemployed, and6.8% were students.Clinical analysis showed that oral hygiene levels in patients with T2DM were significantly worse compared to the control group. The average OHI-S index in the main group was 2.9 ± 0.4, while it was 1.3 ± 0.2 in the control group ($p < 0.01$). The bleeding index (BI) and the PMA index were also significantly higher among diabetic patients.

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