CHANGES OBSERVED IN THE ORAL CAVITY OF PATIENTS WITH OBESITY

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Introduction: Obesity is a widespread issue around the world and is associated with various chronic diseases, including cardiovascular diseases, diabetes, and even oral cavity disorders. Recent studies have shown that obesity significantly affects oral health. This condition is characterized by a higher prevalence of periodontal diseases, dental caries, halitosis (bad breath), and dry mouth syndrome.

Materials and methods: This cross-sectional study was conducted to evaluate the oral health status of patients with obesity. A total of 60 patients participated in the study, divided into two groups:

Experimental group: 30 obese patients with a Body Mass Index (BMI) of 30 or higher.

Control group: 30 individuals with a normal BMI ranging from 18.5 to 24.Patients were selected from among individuals aged 18 to 50 years, without severe pathological changes in the oral cavity, and whose chronic diseases were under medical control.

Survey and Clinical Examination: Each participant provided information about their medical history and eating habits. Oral hygiene was assessed using the OHI-S (Oral Hygiene Index – Simplified), CPI (Community Periodontal Index), and DMFT (Decayed, Missing, Filled Teeth) index. Dry mouth was evaluated based on subjective complaints and the Schirmer test. Halitosis was measured using a special halimeter. Laboratory and visual methods: Saliva samples were taken from the oral cavity, and their pH level, salivary flow rate, and microbiota composition (including Streptococcus

mutans and Lactobacillus spp.) were analyzed. The condition of the teeth and gums was documented using intraoral photographs and a digital scanner.

Statistical analysis:The results were analyzed using SPSS 25.0. Pearson correlation test was used to assess the relationship between BMI and oral indices. The t-test and chi-square test were used to identify differences between the groups. Statistical significance was evaluated at $p < 0.05$.

Results: Significant differences were observed in the oral health status between the experimental (obese) and control (healthy) groups.

In the experimental group, the average OHI-S index was 2.6 ± 0.4, which was significantly higher than in the control group (1.8 ± 0.3, $p < 0.01$). Based on the CPI, 76% of obese patients showed signs of gingivitis or periodontitis, compared to 43% in the healthy group ($p < 0.05$). The DMFT index was 9.3 ± 2.1 in the experimental group and 6.1 ± 1.7 in the control group ($p < 0.05$).

Halitosis was recorded in 68% of obese patients at moderate or severe levels, compared to 37% in the healthy group. Dry mouth (xerostomia) was present in 61% of the obese group, significantly higher than in the control group ($p < 0.05$).

Salivary flow rate and pH level were lower than normal in obese patients, indicating a disrupted oral environment.

Discussion: The results of this study demonstrate significant negative changes in the oral cavity of patients with obesity. Indicators such as oral hygiene, periodontal condition, caries prevalence, and the quality and quantity of saliva were all worsened in the obese group. These outcomes may be related to the metabolic and inflammatory processes induced by obesity, as well as poor nutrition and low hygiene habits. The study results are consistent with previous research, further confirming the negative impact of obesity on oral health

Conclusion: Based on the study, it was determined that obesity leads to a number of pathological changes in the oral cavity. Periodontal diseases, dental caries, dry mouth

(xerostomia), halitosis, and microbial imbalance are more frequently observed among obese patients. This indicates the need for developing individualized dental prevention and care approaches for obese individuals. Dentists and general practitioners should monitor such patients in a comprehensive and coordinated manner.

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