4. ANALYSIS OF THE CONSEQUENCES OF FIXED DENTURES ON PERIODONTAL HEALTH

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Introduction. Dental health is an important aspect of general health. Various environmental and dietary factors can adversely affect the balance of the oral cavity, leading to inflammatory and destructive diseases of the teeth. These diseases, known as periodontal diseases, are a widespread and persistent problem affecting people of all ages. However, current methods of diagnosis and treatment often do not take into account the presence of orthopaedic structures or the influence of these structures on local immunity. This problem arises primarily from the prevalence and severity of this disease in the population. Current methods used to diagnose periodontal diseases usually overlook the influence of orthopaedic structures and only determine the presence of inflammation without identifying the root cause. Different materials with different chemical composition, manufacturing techniques and uses are commonly used in dentistry to replace missing teeth. However, introducing these materials into the oral cavity can disturb the natural balance, leading to oral health problems.

Aim of study. The aim of this study is to investigate the impact of different structural materials used in fixed dentures on the periodontium.

Methods and materials. In the study we selected a sample of 10 patients aged 30-60. We used cobalt-chromium ceramic prostheses fabricated by the conventional method, cobalt-chromium ceramic prostheses fabricated by a CAD/CAM technique and zirconium prostheses fabricated by a CAD/CAM technique. Fixation is achieved by cementation. As research methods we used detailed clinical examinations, including measurement of periodontal pocket depth by means of periodontal probes, also intraoral radiographs for bone level assessment.

Results. It was found that the average duration of use of the prosthesis is 8.8 years, providing insight into the period of functionality of the prosthesis. The prevalence of complications and/or failures of fixed prostheses, which can include a range of problems such as: shade mismatch, overcontact, marginal opening, caries, periodontal disease, gingival bleeding, conjoined margins, fractured porcelain, discomfort, pain, periapical injury, occlusal wear, pontic fracture.

Conclusion. This study highlights the need for patient education on rigorous oral hygiene and the need for regular monitoring to detect and manage potential complications in the early stages. It can be concluded that there is a vast need to improve the success and survival of fixed prostheses by formulating effective methods of pathology control. In addition, dentists require improvement of their clinical skills, their knowledge of biomaterials and understanding of laboratory techniques.