

41. TREATMENT OF PARTIAL EDENTULOUS PATIENTS WITH PARTIAL REMOVABLE DENTURES

Author: Amit Ben Menashe

Scientific adviser: Olga Cheptanaru, MD, Associate Professor, *Nicolae Testemitanu* State University of Medicine and Pharmacy of the Republic of Moldova.

Introduction. The number of partially dentate adults is increasing, and many patients will require replacement of missing teeth. Although current treatment options also include removable partial dentures (RPDs) which can have advantages and are widely used in clinical practice. However, a significant need exists to advance materials and fabrication technologies because of the unwanted health consequences associated with current RPDs. Metal-based and acrylic partial dentures constitute the treatment of choice in many cases of prosthetic rehabilitation. Loss of teeth and using a removable denture significantly affect patient's quality of life.

Aim of study. To assess the current state of and future need for prosthetics such as RPDs for patients with partial edentulism, highlight areas of weakness, and outline possible solutions to issues that affect patient satisfaction and the use of RPDs and to determine and compare OHRQoL of all-acrylic and flexible RPD wearers at baseline and after use of dentures.

Methods and materials. The data on treatment for partial edentulism were reviewed and summarized with a focus on currently available and future RPD designs, materials, means of production, and impact on oral health. Data on patient satisfaction and compliance with RPD treatment were also reviewed to assess patient-centered care. Three types of partial removable dentures were evaluated: partial removable denture with metallic framework, partial acrylic removable denture and flexible partial denture. Study was done using a cross-over design, involving 30 patients with Kennedy class I and II edentulism. Patient recruitment and review were done over an eight-month period in the Department of Stomatological propaedeutics "Pavel Godoroja", *Nicolae Testemitanu* SUMF. OHRQoL (oral health related quality of life) was assessed with the oral health impact profile-14 questionnaire. Data were analyzed using descriptive and multivariate analysis at a significant level of $p < .05$.

Results Design, materials, ease of repair, patient education, and follow-up for removable partial denture treatment all had a significant impact on treatment success. Almost 40% of patients no longer use their removable partial denture within 5 years because of factors such as sociodemographic, pain, and esthetics. Research on RPD-based treatment for partial edentulism for both disease-oriented and patient-centered outcomes is lacking. At baseline, there was a difference in mean OHRQoL scores with age; scores reduced from 12 ± 10 to 5.5 ± 6.5 after using the all-acrylic denture and 4 ± 5 with the flexible denture.

Conclusion. Future trials should evaluate new RPD materials and design technologies and include both long-term follow-up and health-related and patient-reported outcomes. Advances in materials and digital design/production along with patient education promise to further the application of RPDs and improve the quality of life for patients requiring RPDs. Partial edentulous patients were more satisfied with the flexible RPD than the acrylic resin RPD. There was improvement in the OHRQoL of patients with use of flexible partial dentures. Therefore, thermoplastic materials are possible alternative RPD base materials in patient management.