

THE RELEVANCE OF COMPLETE EDENTULISM TREATMENT AND MODERN APPROACHES: CLINICAL RESEARCH RESULTS

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Introduction

Complete edentulism is a global health problem, especially prevalent among the elderly population. According to the World Health Organization (WHO), 30–50% of individuals aged 60 and above suffer from complete edentulism. This condition affects not only food processing but also the social, psychological, and overall quality of life of individuals (WHO, 2020).

In recent years, the use of advanced biomaterials, 3D technologies, and personalized approaches has been increasing in the treatment of complete edentulism. These developments have opened up new possibilities in healthcare and have raised the demand for higher quality treatment.

We would also like to emphasize that our previously published scientific works will be referenced in the literature section.

Opinions of scholars:

- Smith and colleagues (2022) emphasized that the development of biomaterials and the widespread use of CAD/CAM systems have accelerated the process of manufacturing complete dentures and improved their quality.
- Ahmed and Khan (2023) demonstrated that the use of biomaterials is crucial in improving the adaptation of dentures in cases of complete edentulism.
- Kurylandskiy (2021) developed controlled phases of adaptation for complete dentures, facilitating the process for patients.

Materials and Methods

The study was conducted in three dental centers in Uzbekistan, involving **100 patients aged 60–70 years**. Among them, **45 were men** and **55 were women**, all diagnosed with complete edentulism.

• Diagnostic methods:

- Visual inspection and palpation of the oral mucosa.
- Occlusion analysis using articulators and facebow.
- Functional impression taking using personalized trays.

• Research phases:

- Evaluation of the patient's jaw and mucosal conditions.
- Clinical and laboratory phases of manufacturing complete dentures.
- Observation of adaptation phases following Kurylandskiy's method.

Results and Discussion

The research results were analyzed based on the following statistical data.

1. Anatomical and Functional Characteristics of Edentulous Jaws

Gender	Alveolar Ridge Resorption (%)	Mucosal Sensitivity (%)
Men (45)	76%	32%
Women (55)	88%	46%

It was observed that women have a higher degree of alveolar ridge resorption compared to men, which negatively impacts denture retention.

2. Occlusion and Articulation Adaptation Indicators

Parameters	Ideal Fit (%)	Adjustment Required (%)
Central Occlusion	68%	32%
Articulator Check	56%	44%

These results indicate that incorrect determination of the central jaw relationship leads to the need for readjustment of dentures.



3. Adaptation Phases According to Kurylandskiy

Phases	Adapted (n)	Not Adapted (n)
First week	43	57
Second week	85	15
Third week and beyond	96	4

In the adaptation phases, the majority of patients fully adapted to their dentures by the end of the third week. Additionally, 10% of patients experienced denture-related stomatitis, which was addressed through appropriate corrective measures.

Relevance and Future Prospects

- In recent years, the introduction of advanced biomaterials and innovative technologies has significantly improved the quality of denture treatment.
- However, there is a need for further research into automation of the denture manufacturing process and the widespread investigation of new biomaterials.
- Given the increasing aging population, improving the quality of edentulism treatment and ensuring social adaptation of patients is becoming increasingly important.

Conclusion

Personalized approaches, modern biomaterials, and adherence to clinical protocols significantly accelerate the adaptation process of complete dentures. The findings of this study contribute to improving the effectiveness of edentulism treatment.

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