

# OROPROTHETIC REHABILITATION IN GERONTOTHERAPY – CLINICAL CASE –

MIHAELA ROMANIȚA GLIGOR<sup>1</sup>, MIHAELA CERNUȘCĂ-MIȚARIU<sup>2</sup>, SEBASTIAN CERNUȘCĂ-MIȚARIU<sup>3</sup>, DRAGOȘ DĂDĂRLAT<sup>4</sup>, LAURA ȘTEF<sup>5</sup>, BOGDAN OPREA<sup>6</sup>

<sup>1,2,3,4,5,6</sup> "Lucian Blaga" University of Sibiu

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**Abstract:** Gerontology as the medical field concerned with disease by the elderly patients constitutes a separate section of dentistry.(3) In these cases, the oroprothetic rehabilitation considers preserving the dental structures as a stable dento-parodontal support. It creates a prosthetic field with a positive result of the sustentation surface of the prosthetics with an immediate and long-term effect that benefits both the patient and the clinician.(1,2) The clinical case presented is an example of rehabilitation and conservation of tooth structure through the equilibration of the homeostatic dentomaxillary device. Gerontology, science that includes research in many fields of biology, medicine, nursing, and dentistry creates a special care for dental needs. Prosthodontic rehabilitation of elderly adults' mean conservatory dental treatment with long-term benefits for patient and clinician, like avoiding lesions of the oral mucosa, a good oral hygiene, stabile dental support for over denture without disorthodontic teeth movement.(2,3)

**Cuvinte**

cheie: overdenture, igienă orală, gerontologie, reabilitare protetică

**Rezumat:** Gerontologia ca și domeniu medical preocupat de terapia afecțiunilor la persoanele vârstnice, rezervă medicinei dentare un capitol aparte.(3) Reabilitarea oroprotetică la acești pacienți are în vedere conservarea structurilor dentare ca suport dento-parodontal stabil. Se creează un câmp protetic cu o ofertă pozitivă a suprafeței de susținere a lucrării protetice cu efecte imediate și de lungă durată, benefice pentru pacient și clinician.(1,2) Cazul clinic pe care îl vom prezenta reprezintă un exemplu de reabilitare și conservare a structurilor dentare, cu echilibrarea homeostaziei aparatului dentomaxilar. Gerontologia, ca știință, include cercetări în multe domenii precum biologie, medicină, asistență medicală (nursing) și medicină dentară, care asigură o asistență specială pentru nevoile stomatologice ale pacientului vârstnic. Reabilitarea protetică a pacientului adult vârstnic presupune tratament stomatologic conservator, care să asigure beneficii, pe termen lung, atât pentru pacient, cât și pentru clinician.(2,3)

## INTRODUCTION

The situation of the elderly patients through their complexity related to their general pathology and medication constitutes a difficult challenge and is a serious problem for the dentist to find clinical and ethical solutions for it. Cognitive decline, xerostomia, secondary effects of medication, heart disease, and dysmetabolic syndrome creates in the orodontal field a weak dento-parodontal support and a weakened resistance. Lesions of the oral mucosa are common and widespread in their clinical manifestation. Designing an appropriate treatment plan, to avoid effort caused by prolonged visits to the clinic, to reduce injuries caused by the acrylic, movable dentures with wire hooks and to avoid the difficulty in occlusal equilibration in the case of moveable dentures to favor a stable dento-parodontal support of these prosthesis, should govern the main principles of elderly patient treatment.(2,3)

## CASE PRESENTATION

The clinical case we present below considered solving a lateral frontal-terminal edentulous, retaining more dental units and avoiding possible Class III Kennedy edentulous transformation in the terminal class I edentulous with its related prosthetic balance deficiencies.

Patient, C.C., 85 years old came to the cabinet with a frontal unidental edentation. The dento-parodontal assessment reveals a profound marginal periodontitis without dental mobility, fixed pluridental prosthesis in sectors 1 and 3 made of bronze alloy with acrylic facets compromised in terms of cervical adaptation, aspect and occlusal equilibration. At the mandible we can observe a lateral, frontal-frontal, edentulous, at the sides pluridental fixed, mixed metal - polymer prosthesis and a polymer frontal bridge. All prosthetic devices are compromised in terms of cervical adaptation and unbalanced occlusion (figure no. 1).

**Figure no. 1. Frontal unidental edentation**



<sup>1</sup>Corresponding author: Mihaela Cernușcă-Mițariu, Str. Ștefan cel Mare, Nr. 6, Sibiu, România, E-mail: confortmitariu@yahoo.com, Tel: +40269 212751

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A decision was made with the consent and demand of the patient to approach the prosthetic solution of the prosthetic maxillary area through a mobile denture stabilized through coronary root restorations with occlusal staples and teflon-coated rings. After the ablation of the prosthetic work the maxillary prosthetic area shows a lateral, front-end edentulous of 6 teeth. After the endodontic treatment and prosthetic preparation by grinding and catheterization of the root canal the prosthetic field was imprinted and the required prosthetic pieces were made on the working models (figure no. 2) to achieve the anchoring of the partial prosthesis.

**Figure no. 2. Prosthetic pieces to achieve the anchoring of the partial prosthesis**



Special systems with occlusal staples are cemented in the buccal cavity (figure no. 3). In this way we can preserve the last maxillary pillar managing to avoid turning the maxillary area from quadrant 1 edentulous to a terminal one. Multiple prosthetic elements and the wide ridge allow afterwards a slim but stable partial prosthesis.

**Figure no. 3. Cementing of the special systems in the oral cavity with occlusal staples**



The prosthetic field is imprinted with silicone (figure no. 4) using the technique: Wash Technique.

**Figure no. 4. Silicon imprint of the prosthetic field**



Afterwards, it follows the installation in the articulator for building the future metallic framework. To achieve stability and the success of the metallic framework capsules are reproduced using analogs in the laboratory (figure no. 5).

**Figure no. 5. Metallic framework assembled in the articulator**



After making the metal framework we can make the model of the partial denture (figure no. 6) using laboratory capsules as a retention system, which is also required to test the model in the buccal cavity.

**Figure no. 6. Model of the partial denture**



The model of the partial denture is made in a neutral relation to the first inferior molar and frontal psalidodontal occlusion (figure no. 7).

**Figure no. 7. Model of the partial denture in a neutral relation to the first inferior molar**



After the polymerization of the base of the partial denture the special Teflon-coated systems are fixed, selected individually (figure no. 8) according to the teeth pillar implantations. We used the Roy Teflon-coated system for 3

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teeth pillars and 6 less retentive transparent systems for other teeth.

**Figure no. 8. Fixing of the special Teflon-coated systems according to the teeth pillars implantation**



The final prosthetic rehabilitation (figure no. 9) conveys an aesthetically balanced appearance, entirely satisfactory for patient with a correct occlusal plan, which also allows a mandibular occlusal rehabilitation.

**Figure no. 9. Final prosthetic rehabilitation**



### CONCLUSIONS

Dental care for the elderly patient offers, today in the beginning of the 21<sup>st</sup> century spectacular technical, clinical and laboratory possibilities. Painless, conservative treatments, should govern the principles of the dental gerontology.(1,2) Implant application and over denture on implants is a solution to any edentulous at this moment, but it must be judiciously selected especially regarding the elderly patients.

Recovering the dental structures, where possible, and their preparation for the prosthesis is a simple, painless option for these patients, which preserves their own dental structures and provides valuable dento-parodontal support for the partial prosthesis conveying to its sleek and durable design.

### REFERENCES

1. Finbarr P. Teeth for life for older adults, Quintessence Publishing Co. Ltd., London; 2002.

2. Foma N, Baat CD, Bratu C, Mercut V, Petre AI, Poșor S, Trăistaru T. Protetică Dentară, Vol. I, Editura Enciclopedică, București; 2011.
3. Forna N, Baat CD, Lascu L, Păuna M, Protetică Dentară, Vol. II, Editura Enciclopedică, București; 2011.