

## PRACTICAL ASPECTS OF THE PROSTHETIC REHABILITATION OF KENNEDY 1 CLASS EDENTATION

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### ABSTRACT

The purpose of the study is materialized by assessing the possibilities and limits in the treatment of partial protuberance with skeletal prostheses using special elements of maintenance, support and stabilization, depending on the clinical picture specific to each patient. The factual material was represented by a group of 51 patients diagnosed with partial extended and subtotal edentation, aged 40 to 60, age range almost synonymous with the targeted pathology and accompanied by the whole range of changes and impairments of local parameters, locoregional and generalized ones, the latter having a particularly important role in targeting the therapeutic plan. We have highlighted the increased prevalence of Kennedy first Class among patients with partial extended edentation and association with other edentational classes in the field of removable prostheses, which argues the importance and contribution of removable solutions in ameliorating edema changes and the impact of treatment prosthetically removable on the quality of the patients' lives.

**Key words:** *extended partial edentation, flexible removable prostheses, First Kennedy Class, casps, attachements*

### INTRODUCTION

The territory of the extended partial edentation confronts the practitioner with a complete and complex pathology, echoing the intraoral balance, with definite consequences on facial harmony, outlining a clinical picture that influences the social integration of the patients[1-6].

The treatment sphere offers multiple

restorative possibilities, mostly receiving complex oral rehabilitation values, their choice being limited by the particularities of the prosthetic field corroborated with the clinical and technological endowment, without excluding the socioeconomic criterion that decisively directs the therapeutic manner[7-12].

### THE PURPOSE OF THE STUDY

The purpose of the study is materialized by assessing the possibilities and limits in the treatment of stretched partial protuberance with skeletal prostheses using special elements of maintenance, support and stabilization, depending on the clinical picture specific to each patient. Special attention was paid to the prevalence of Kennedy first Class edentation evaluated in the context of the age group and recommended prosthetic solutions both in the context of the clinical case and the socio-economic perspective.

## MATERIAL AND METHOD

The factual material was represented by a group of 51 patients diagnosed with partial extended and subtotal edentation, aged 40 to 60, age range almost synonymous with the targeted pathology and accompanied by the whole range of changes and impairments of local parameters, locoregional and generalized ones, the latter having a particularly important role in targeting the therapeutic plan (Fig.1).

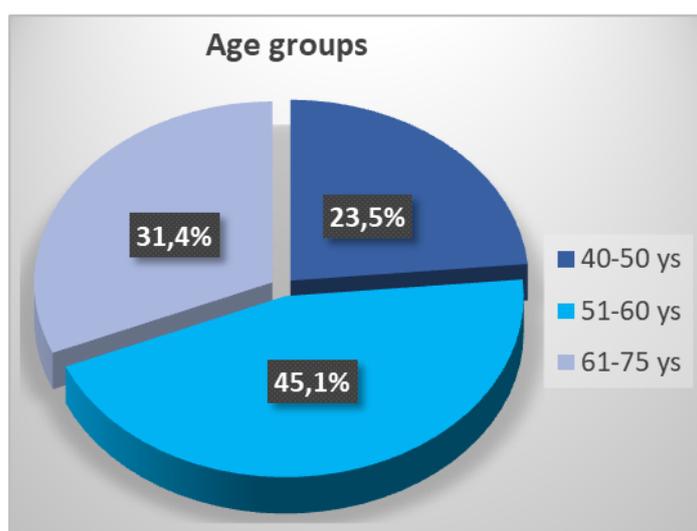


Fig. 1. Distribution by age group

## RESULTS AND DISCUSSIONS

In terms of gender distribution, the number of female patients prevailed in the percent of 58,8% compared to 41,2 % male patients.

The sex of the patients, in full

agreement with the age, and profession, taking into account the topography and the amplitude of the edentation, are correlative aspects that put their decisive impression on their expectations regarding the restoration of the dento-somato-facial balance (Fig.2)

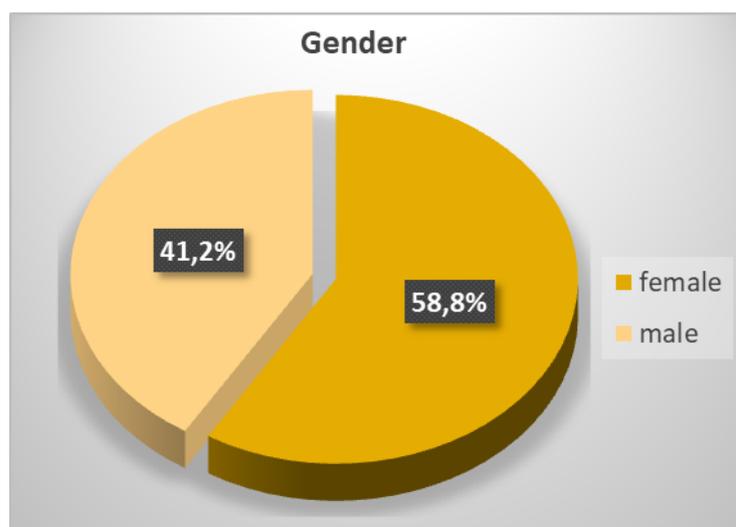


Figure 2. Distribution by gender

We have highlighted the increased prevalence of Kennedy first Class Edentation among patients with partial extended edentation and association with other edentational classes in the field of removable prostheses, which argues the importance and contribution of removable solutions in ameliorating edema changes and the impact of treatment prosthetically removable on the quality of the patients' lives.

Depending on the morpho-functional particularities of the clinical cases and for the socio-economic reasons, the chosen treatment solutions combine (Fig.3):12

acrylic partial dentures with wire hooks, as therapeutic alternatives with social addressability;13 flexible acrylate partial prostheses, a viable alternative to prostheses with social addressability;17 skeletal prostheses with clasps, the classic treatment choice; 7 skeletal prostheses with special elements of maintenance, support and stabilization, high-class solutions that offer besides enhanced comfort due to the particular features of the components; 2 overlay prosthesis;

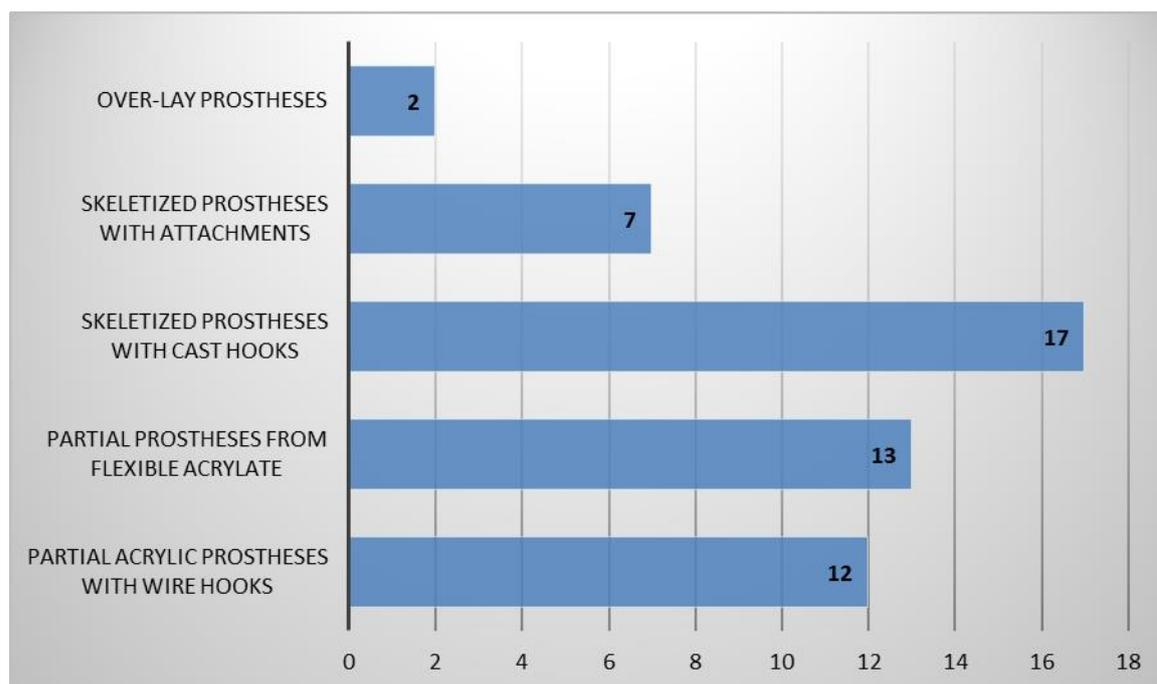


Fig. 3. Distribution based on therapeutic solutions

Of these, mixed prostheses with special elements of maintenance, support and stabilization have been considered highly demanding therapeutic alternatives, along with an over-lay prosthesis.

An essential stage in the development of the clinical and technological algorithm of each case of partial extended edentation was the elaboration of the treatment plan, materialized in the individualization of all the general data regarding the clinical, paraclinical and constructive aspects of the removable prosthesis, the actual synthesis of the clinical biological indices - positive and negative and the search for the therapeutic correspondent according to the clinical form

of the partial edentation, ensuring the achievement of the prophylactic and curative objectives to the highest degree, the morphological and functional restoration of the oro-maxilo-facial device in the most complete way.

Flexible prosthesis is found in the therapeutic area of the Kennedy class I edentations, representing the therapeutic choice for clinical cases where edentary crest resorption and atrophy processes influence the choice of the final therapeutic decision, an important role for the antagonist arcade type, occlusion and biomechanical equilibrium(Fig.4).



Fig.4. Practical aspects for using flexible removable prostheses

A first selected clinical case, grafted on mixed prosthesis, in which the prosthetic device is represented by the elastic variant diagnosed with partially edentation jaw Class I Kennedy with 1 change, the subclass C Lejoyeux and the partially mandibular edentation class II Kennedy with 2 changes, the subclass C Lejoyeux, carotid etiology, functional discomfort, swallowing, physiognomy, slow evolution, local, regional and general complications, prognosis favorably untreated, untreated.

The evaluation of the clinical and biological indices is a decisive starting point for the elaboration of a relevant therapeutic plan, which is valid for the chosen therapeutic option that can remain anchored in the sphere of social prosthesis or in the area of implanto-prosthetic therapeutic solutions of choice for the young patient (Fig.5).

The loco-regional indices are characterized by the negative aspects cantonated at the ATM level, noting the mandibular dynamics aspects characterized by asymmetric condylous excursions, which accompany the left-hand side deviation.



Fig. 5 Initial aspect of clinical case

Regarding the local odonto-periodontal clinical-biological indices there is a small number of odonto-periodontal units with reduced coronary volume, which is reflected in the lower level sub-dimensional and generalized accentuated abrasion.

Regarding periodontium, we note the periodontal recession accompanied by the radiological clinical-biological index indicating the horizontal lysis phenomenon in the horizontal plane, aspects accompanied by dental mobility grade 1.

The muco-bone support is characterized by the presence of resilient mucosa, irregular crests, negative indices that can be positively promoted by specific training or choosing a biomaterial with a structure adapted to these

particularities.

Negative aspects of occlusion reside in the modification of static occlusion parameters due to coronary destruction stretched to existing odonto-periodontal elements, inducing changes in dynamic occlusion trajectories, evaluation criteria to be taken into account in provisional prosthesis, essential for the rehabilitation of this clinical case.

After investigating and analyzing the treatment plan in accordance with all the above mentioned principles and criteria, the following therapeutic solution was chosen: at the jaw, fixed prosthetic metalo-ceramic at the level, and elastic prosthesis at the level of the madibula, fixed restauration at the level and elastically partial mobilizable prostheses.



Fig.6 Final aspects of flexible removable prostheses

The maxillar partially mobile prosthesis made of flexible acrylate consisting of:

1 saddles made of flexible acrylate with 6 anatomical teeth acrylic, cuspid medium, main connector: palatine plaque distal skew dento-mucosal from flexible acrylate, EMSS: dental open clasps on 14, 2.4, made of flexible acrylate.

The 54-year-old V.C., male, presented at the Iasi Dental Dental Clinic Base for restoring the functions of the stomatognath system affected by partial extended edentation of the untreated maxillary and

madibular edentation.

The stage of sanitary education specific to any prosthetic treatment was carried out. The patient did not pose problems of rebalancing the general condition and thus established a preprotetic treatment aimed at the oral cavity, in which were practiced: the curettage of affected periodontal tissues, the treatment of complicated coronary lesions at level 1.1,1.2,2.1,2.2.2,3and practicing dental extraction at 1.6,1,7. and 2.7,2.8



Fig. 7 Final aspects of oral rehabilitation using overdenture and complete denture.

Overdenture with 6 corono-radicular devices, using the attachments as elements for maintaining, support and stability, was the election therapeutical for maxillary field, according with particularities of clinical case, and for mandible the therapeutical solution was represented by complete denture.

## CONCLUSIONS

1. There are many therapeutic possibilities in the partially stretched edentation, the correct choice being made with discernment and concerning the peculiarities, according the exigencies of the case/situation, corroborated with the technical limits the dentist is sometimes facing.

2. The negative clinical-biological indices present at the prosthetic field level, limit in a decisive way the choice of the therapeutical solution, leading to a solution combining as a compromise the best ways driving to a rehabilitation to the system level of the deficitary situations.

3. The correct and complete evaluation of the prosthetic field is needed in choosing the therapeutical solutions but it must not be forgotten the aspect linked to the socio economic side of the case, detail that, besides the admirable possibilities of prosthetic restauration existent and available, has a ultimate and final word in choosing the treatment solution.

4. A very important aspect is the hospitalization process, because even if the chosen prosthetic solutions admirable restaure the harmony of the maxilo facial field affected by edentation as a whole, changes can appear at this level, due to natural processes associated to the age or other diseases, but also to an insufficient higiene.

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