

# ORAL REHABILITATION WITH IMPLANT RETANEID OVERDENTURE: A CASE REPORT

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## ABSTRACT:

Treatments involving oral rehabilitation with overdentures have been widely used by experts in the field of dentistry. Overdentures operate similarly to conventional dentures, predominantly mucosal support, but the retention and stabilization of the device are significantly improved by fixing the implants presenting itself as a mucus - supported prostheses and implant-retained. A key to the success of this treatment factor lies in the correct choice of restraint to be used, there are many restraints overdentures , each with its own peculiarities . The objective of this case report is to describe a case of a patient JSR , 55, male , leucoderma , complaining about the lack of aesthetic , retention and stability of their mandibular removable partial denture which made it difficult occlusion , speech and chewing . In planning we opted for extraction of the remaining dental elements and installation of two temporary implants with immediate activation and two more traditional dental implants in intermental region with retaining ball type ( spherical or O-ring ) system. The prosthesis was carried mouth to determine the extent of the edges and adjustments and the patient was instructed about the importance of oral hygiene in health maintenance and the methods for cleaning and prosthesis fitting system , emphasizing the need for periodic returns for monitoring and control. The treatment of choice gives good aesthetic and functional results for the patient.

**Key words:** Overdenture,Implant,Oral rehabilitation.



## INTRODUCTION:

The loss of all dental elements of one or both arches is an important disability that affects self-confidence, communication, masticatory function and esthetics. Patients treated with conventional prostheses are constantly dissatisfied due to poor retention, stability, discomfort or pain in the supporting tissues. Despite the absence of tooth cannot be rehabilitated to a natural condition, the making of a prosthesis can restore health to key aspects such as aesthetics and function. In this regard, rehabilitation by means of implants offers significant improvements over conventional prostheses, improving both patient satisfaction and the quality of life.<sup>[1, 2]</sup>

Currently, various forms of treatment for edentulous patients complaining of retention and / or unsatisfactory stability are available, as such, new conventional denture, implant-retained implant-supported overdentures and fixed prostheses. Accordingly, treatments involving oral rehabilitation with overdentures have been widely used by experts in the field of dentistry. Overdentures operate similarly to conventional dentures, predominantly mucosal support, but the retention and stabilization of the device are significantly improved by fixing the implants presenting as prosthesis mucus-supported and implant-retained. The technique allows the use of the prosthesis immediately after implant placement (immediate loading) due to the use of transitional implants that are activated in conventional implant overdenture while awaiting the period of osseointegration. This is an alternative therapy to obtain retention and stability to conventional full

denture, two implants sufficient to ensure satisfactory fixing.<sup>[3, 4, 8]</sup>

One determining factor in the success of this treatment lies in the correct choice of restraint to be used; there are many restraints overdentures, each with its own peculiarities. Being the professional's responsibility to evaluate each system and indicate that offers the best results for each clinical situation. Therefore, to achieve success is a *prerequisite* prior planning aimed at meeting the individual characteristics of each patient. This work is present report describes a case whose rehabilitative treatment was implant-retained overdenture with spherical-type restraint.

## CASE DETAIL:

A male patient, leucoderma, 55 year old, attended clinic Specialization in Implantology, Universidade Federal Fluminense, complaining about the lack of aesthetic, retention and stability of a mandibular removable partial denture which made it difficult occlusion, speech and chewing. The prosthesis was found, supported by four elements periodontally compromised teeth, with mobility (Fig. 1). In planning we opted for extraction of the remaining dental elements and installation of two temporary implants with immediate activation and two more traditional dental implants in intermental region with retaining ball type (spherical or O-ring) system. This fitting is a male / female assembly, the male being represented by the intermediate pillar directly connected to the implant and the

female composed of a rubber ring and a capsule surrounding the prosthesis at the base of-. the transitional implants MDL diameters of 2.5 mm x 13mm Brand were *Intra-Lock*<sup>®</sup> System installed. One of the main factors that must be taken into consideration is the parallelism between the implants, since the future prosthesis it is a ball-type overdenture on fittings where the implants will not be joined by a bar (Fig. 2a). After installation of MDL implants were placed capsules (retainers / Female) in transient O'rings implants. We used a rubber sheet between the mark Hygienic female and male to prevent the acrylic resin enters into chemical polymerization undercuts for capturing the female to the denture base. Subsequent to capture procedure in which care is important to wait the final resin attached to the prosthetic intercuspitation maximum position, the position was found in the female component denture base.

The prosthesis was carried mouth to determine the extent of the edges and adjustments and the patient was instructed about the importance of oral hygiene in health maintenance and the methods for cleaning and prosthesis fitting system, emphasizing the need for periodic returns for monitoring and control. The patient authorized the publication of this case by a term of free and informed consent.

## DISSCUSSION:

With the discovery of osseointegration of dental implants by Branemark (1985) and its clinical application in dentistry, a wide variety of rehabilitative solutions for edentulous patients has been widely employed, providing a better quality of life, aesthetics and function to the patient.<sup>[9]</sup> The use of immediate loading implants is a form of alternative treatment, compared to conventional technique proposed by Branemark, and aims to reduce the time of treatment, allowing the prosthetic procedure is performed immediately after implant placement.<sup>[10]</sup>

Where installation of dental implants in which the goal is to leave them exhausted and the patient wishes to receive prosthesis on the same day of surgery, an interesting alternative is to install temporary implants that receive prosthesis immediately about them. The activation of these brought several benefits to the patient. This activation was possible thanks to the fittings ball type (O-rings) that allow the retention of the prosthesis for temporary implants as occurred in the case presented.

A overdenture on implants proves extremely beneficial in the rehabilitation of edentulous arches, being able to restore the function mastication, phonetics, aesthetics and supporting lip musculature. Also provide significant increase in retention, stability and comfort over conventional dentures and reduce the process of bone resorption

rim. Still, they are lower cost and simplicity of cooking with respect to fixed prostheses on implants, making them more accessible to a larger number of patients. [4,5]

With the development of implants osseointegrated, allowing placement of pillars of support in edentulous areas, and the evolution of rehabilitation treatments, it was necessary to adapt the restraint systems to the reality of the implants. [4, 5] In the presented case we opted for traditional rehabilitation with dental implants and temporary implants in overdenture which enabled the patient to retain the prosthesis while waiting for osseointegration of traditional implants.

Ideal system for overdenture retention should provide good retentiveness, providing stability to the prosthesis, so that great loss of their retentive capacity over time does not, should be easy to

maintain and low cost if they need replacement, and have little time for it to be used in confined spaces intermaxillary favoring aesthetics. It must also have the capacity to assist in biomechanical distribution of functional bone adjacent to the implants and fillers. [5]

## CONCLUSION:

Based on the literature and clinical experience reported that one can conclude overdenture on implants is an alternative to conventional prostheses, with obvious benefits. Has a high success rate, favoring the prosthetic stability by retaining, the patient returns masticatory function, aesthetics, self-esteem and consequently improving the quality of life of patients.

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**FIGURES:**



Figure 1: a. Initial clinical aspect of the patient. b. Temporary implants installed



Figure 2: a. Female being attached to the denture base directly in the mouth with acrylic resin.  
b. Spherical restraint:Aspect of the capsule on the inner face of the overdenture



Figure 3 - Prosthesis finalized