AESTHETIC-FUNCTIONAL IMPLANT-SUPPORTED REHABILITATION IN ANTERIOR REGION – CLINICAL CASE REPORT

REHABILITACIÓN ESTÉTICA-FUNCIONAL IMPLANTO-SOPORTADA EN REGIÓN ANTERIOR – RELATO DE CASO CLÍNICO

REABILITAÇÃO ESTÉTICO-FUNCIONAL IMPLANTO-SUPORTADA EM REGIÃO ANTERIOR – RELATO DE CASO CLÍNICO

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Abstract
Objective: Report the development of an implanted aesthetic-functional rehabilitation in the upper anterior region.
Clinical case report: Patient, male gender, 52 years old, attended dental care wishing to install prostheses on implants previously installed. Clinically it had a temporary removable prosthesis and radiographically implants were found in the region of the teeth 14, 13, 12 and 22. For rehabilitation, it began with the tooth 21 extraction, followed by the installation of conical abutments on the implants and molding for the preparation of a temporary implant prosthesis. After conditioning with the temporary implant prosthesis, the clinical stages were followed for the preparation and subsequent installation of the implant-supported metal-ceramic prosthesis in the region of the teeth 14, 13, 12 and 22 (abutments), and 11 and 21 (pontics) with adequate occlusal adjustments and later follow-ups.
Conclusion: Functional and aesthetic restorations can be obtained when an individualized planning is carried out together with clinical steps properly performed.

Resumen
Objetivo: Informar el desarrollo de una rehabilitación estético-funcional implante soportada en la región anterior superior.
Relato de caso clínico: Paciente, género masculino, 52 años, asistió a la atención odontológica deseando instalar prótesis sobre los implantes previamente instalados. Clínicamente presentaba una prótesis removible provisional y radiográficamente se verificó implantes en la región de los dientes 14, 13, 12 y 22. Para la rehabilitación, se inició con la exodoncia del diente 21, seguido de la instalación de pilares cónicos sobre los implantes y moldeo para la confección de una prótesis sobre implantes temporales. Después del condicionamiento con el provisional sobre implantes, se siguió con las etapas clínicas para la confección y posterior instalación de la prótesis metalocerámica implante soportada en la región de los dientes 14, 13, 12 y 22 (pilares), y 11 y 21 (pónticos) adecuados ajustes oclusales y acompañamientos posteriores.
Conclusión: El restablecimiento funcional y estético puede ser obtenido cuando se realiza una planificación individualizada aliado a etapas clínicas ejecutadas adecuadamente.

Resumo
Objetivo: Relatar o desenvolvimento de uma reabilitação estético-funcional implatossuportada em região anterior superior.
Relato de caso clínico: Paciente, gênero masculino, 52 anos, compareceu ao atendimento odontológico desejando instalar próteses sobre os implantes previamente instalados. Clinicamente apresentava uma prótese removível provisória e radiograficamente verificou-se implantes na região dos dentes 14, 13, 12 e 22. Para a reabilitação, iniciou-se com a exodontia do dente 21, seguido da instalação de pilares cónicos sobre os implantes e moldagem para a confecção de uma prótese sobre implantes provisória. Após o condicionamento com o provisório sobre implantes, seguiu-se com as etapas clínicas para a confecção e posterior instalação da prótese metalocerâmica implanto-suportada na região dos dentes 14, 13, 12 e 22.
O restabelecimento funcional e estético pode ser obtido quando realizado um planejamento individualizado aliado a etapas clínicas executadas adequadamente.


Introduction

Oral rehabilitation involves in most cases a diversified approach, with different stages, in order to provide a better quality of life for the patient, restoring mastication, phonation and aesthetics. Implant-supported prostheses have become an alternative in rehabilitation in partial or total edentulous individuals, whose initial thorough evaluation is an adequate planning, followed by the correct execution of the procedures. To return the aesthetics and function to the patient, one must consider the clinical conditions, the biotype, and aspects socio-cultural and economic, with the purpose of obtaining a better social integration of the individual, thus re-establishing his health.

The loss of teeth at different periods generates a cascade of malignant events to the oral cavity, such as involution of the periodontal tissue, decreased basal area, reabsorption of the alveolar bone, among others, altering the biomechanical behavior of partial or total removable prostheses due to the decrease in stability and retention of these. A fact that causes discomfort for the user of conventional prostheses.

In healthy individuals, the use of implant-supported prostheses has been shown to be an excellent alternative for endéntulo individuals. These characteristics make them much more comfortable to the patient, through a retention and stability superior to conventional prostheses, allowing an increase in masticatory efficiency, and increased safety.

To rehabilitate partially edentulous patients, there must be aesthetic and functional harmony between natural and artificial teeth. This result can be achieved when the dental surgeon plans and executes the treatment, taking into account the general physiological conditions and the stomatognathic system. Thus, this article aims to report the development of an esthetic implant-supported rehabilitation - functional in anterior superior region in patient who had the surgical installation of the implants in different periods.

Clinical Case Report

Patient, male, 52 years old, normossemic, attended the clinic of the discipline of prosthesis on implants of the Postgraduate Program in Oral Rehabilitation of the School of Dentistry of Ribeirão Preto, University of São Paulo (FORP / USP), wishing to install prostheses implants that had been previously installed.

During the initial consultation, the patient reported that he was under restorative treatment of natural teeth. A panoramic radiograph revealed juxtaposition of the bone tissues to the implants in the region of the teeth 14, 13, 12 and 22, carried a fixed prosthesis on the implant in the region of the tooth 22 with unsatisfactory adaptation and a temporary removable partial denture malapos; teeth 14, 13, 12 and 11 (Figure 1).
For the region to be rehabilitated it was indicated the tooth 21 that had severe mobility and unsatisfactory endodontic treatment, which had its crown sectioned, in order to enable the preparation and installation of a provisional implant-supported prosthesis. This was followed by the installation of the conical abutments and molding by the open tray technique with condensation silicone (Figure 2).

When the prosthesis was implanted on a provisional implant, carried out in a united way, the installation was performed, with the execution of the occlusal adjustments immediately and in subsequent consultations. Thus, the conditioning of the gingival tissues was also allowed.
After the conditioning period with the provisional prosthesis, followed by molding by the technique of the open tray in silicone by addition to the making of metal copings. When these were made, they were installed to the prosthetic abutments and were joined by means of self-curing acrylic resin Duralay®, to be later sent to the laboratory and to realize a soldering point, allowing the obtaining of a single body metal coping. With the latter, it was positioned again to the conical pillars obtaining passive adaptation. Occlusal registration with Duralay® self-curing acrylic resin was then performed on the metal coping in position (Figure 4).

**Figure 4.** A - Adaptation of the metal copings to the conical abutments and union with self-curing acrylic resin Duralay®; B - Adaptation of the metallic coping in a single body to the conical abutments and occlusal registration with self-curing acrylic resin Duralay®.

After the occlusal registration, the color was taken for the application of the ceramic on the metallic coping. After this laboratory stage, the implantation of the definitive implant implants was carried out, with the respective immediate occlusal adjustments. In subsequent consultations, the subsequent adjustments, finishing and polishing with specific rubbers were carried out for this purpose (Figure 5).

**Figure 5.** A - Vestibular view of the implant-supported permanent denture installed; B - Patient's high smile after installation of the definitive implant-supported prosthesis.

At the end, it was possible to obtain an adequate oral rehabilitation, providing occlusal harmony and aesthetic restoration of the patient, even considering the installation of the implants previously in different times and in regions with bone unevenness.

**Discussion**
With the advent of osseointegrated implants, dentistry provided several options to rehabilitate patients using these materials. Over the years, studies have been carried out with the aim of improving and simplifying surgical and rehabilitation techniques, as well as implant architecture.\(^{9,10}\) In this clinical case it was indicated the maintenance of implants previously installed due to adequate osseointegration. However, some factors should be taken into consideration such as absence of infection, good hygiene, adequate positioning, implant stability and preservation of the cortical bone.\(^{11}\) The implant-supported prosthesis was installed on implants with an internal hexagonal prosthetic platform, according to the implants previously installed, and previous use of provisional implant-supported prosthesis. This type of prosthetic platform presents a lower voltage gradient, with a distribution of occlusal forces along the axis of the implant satisfactorily.\(^{12}\) The need to install temporary prostheses allows the adaptation of the new oral condition to what was previously.\(^{13}\) Implant-supported prosthetic rehabilitation should be guided by a treatment plan according to the proper installation of the implants, when considering their three-dimensional positioning. Thus, it is important that the surgical technique be governed by a reverse plan, especially when there are extensive and multiple edentulous regions, allowing the prosthesis installation to meet the aesthetic and functional requirements.\(^{10,14}\) Despite the relevance of reverse planning for the success of implant-supported rehabilitation, in this clinical case, the patient already presented to the service with implants previously installed.

This clinical approach has become relevant because it allows to contextualize that, when implant-supported oral rehabilitations are performed properly, after a well-structured planning, it becomes possible to return the aesthetics and function, allowing for the longevity of the treatment performed and improvement in the quality of life.

Conclusion

According to this clinical case it can be concluded that functional and aesthetic restoration can be obtained when an adequate individualized planning is carried out, together with the accomplishment of clinical stages in the correct way.

References