

## Grand Morse Neodent Implants: A Case Report Rehabilitating Smile and Restoring Self-Esteem

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Dental implants; Oral health; Tooth loss

### 1. Abstract

With the advent of modernity and several implant companies, it has become more difficult to achieve the excellence that patients seek when they need oral rehabilitation through implants. Edentulism in Brazil continues to exist. This study aimed to present the rehabilitation of a female patient in her forties who was dissatisfied with her smile and oral health and, through Neodent implants, was able to fulfill her dream of having fixed teeth again. In addition, it was possible to observe that the design of the implant was fundamental for primary stability.

### 2. Introduction

The search for aesthetics and function of the stomatognathic system grows every year. Rehabilitating a patient who has lost several teeth throughout his or her life is a challenge, since rehabilitation with dental implants is a careful process that aims not only at integrating the implant with the jawbone (osseointegration), but also at restoring oral functionality and aesthetics, in addition to promoting good oral health in the long term [1]. The success of this rehabilitation depends on several factors, including the surgical technique used, postoperative follow-up, patient cooperation, and ongoing care of the implant [1]. Tooth loss is considered a public health problem in many countries, including Brazil, due to its consequences for both physical health and quality of life. Tooth loss can directly affect chewing ability, facial aesthetics, speech, and also has psychological implications, such as low self-esteem and emotional difficulties [2]. Treatment for tooth loss, such as dentures, dental implants and other procedures, can be costly, especially for those who do not have access to health insurance or public dental

coverage. This creates a financial burden for patients and for the public health system, which has to deal with a large number of dental rehabilitation cases [2,3]. Using implants to replace missing teeth is the best way to help the patient. Osseointegration is the biological process that occurs when a dental implant, usually made of titanium, fuses in a stable and lasting way with the bone around the area where it was placed. This process is essential to ensure the stability of the dental implant and is one of the reasons why dental implants have such a high success rate [3]. The present study aims to report the case of a patient who was dissatisfied not only with her natural teeth, but also with the absence of teeth and sought, through rehabilitation with implants at a Neodent partner clinic, to improve her aesthetics, function and self-esteem.

### 3. Case Report

A 48-year-old female patient sought out a private dental clinic complaining of tooth pain, loose dentures, tooth mobility, difficulty eating and low self-esteem. Clinical examination revealed periodontal disease with generalized edematous gingiva, exposed roots, mobile lower incisors, and a precarious upper provisional removable partial denture (Figure 1A and 1B). Radiographically, bone loss of the upper teeth and lower incisors, tooth extrusion, and inverted dental arches were observed (Figure 2). In cross-sectional views of cone beam computed tomography, the patient had sufficient bone height and thickness to undergo rehabilitation with dental implants (Figure 3). The treatment proposal presented to the patient was accepted and she underwent surgery in a dental office, under antibiotic coverage with 2g of amoxicillin one hour before the procedure and 8mg of dexamethasone also one hour before

the procedure. Under local anesthesia through bilateral blockade of the inferior alveolar nerves with articaine 4% 1:200,000, the patient had all her lower teeth removed, underwent bone plasty with a zirconia drill to create a plateau, using the external oblique line as a reference, and 4 Neodent Helix Grand Morse 4.0 x 13mm implants were installed in the intraforaminal region. Due to the implant geometry and professional expertise, it was possible to obtain a torque of 80Ncm on all implants, achieving excellent primary stability, which allowed the patient to have the protocol-type prosthesis immediately loaded. Four mini Grand Morse abutments measuring 2.5mm in height were installed and molding for the prosthesis was started. The patient's upper teeth were also removed during the same surgical procedure, as well as the molding for the production of a temporary complete denture. Both dental arches were sutured with Bioline 4-0 absorbable thread. For the patient's postoperative comfort, she was medicated with Spidufen

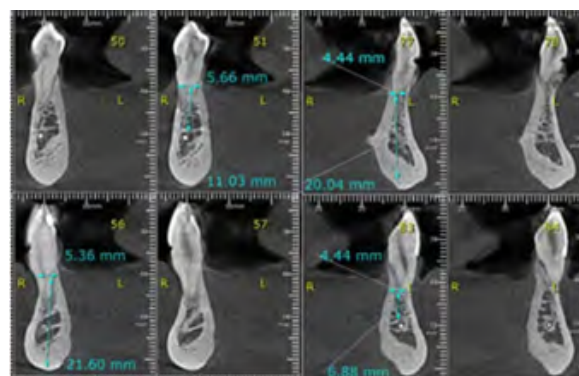
600 mg every 12 hours for five days, Dipyron 1 g every 6 hours for three days and continued with the preoperative medications, namely Dexamethasone (two tablets every 8 hours for two days) and Amoxicillin (one capsule every 8 hours until the box was finished). Two days after surgery, the patient was already trying out the wax-mounted teeth of the upper complete denture, as well as the teeth mounted on the bar of the lower protocol-type prosthesis. On the third post-surgery day, the patient had the protocol-type prosthesis installed in the lower arch and an upper complete denture delivered (Figure 4). A panoramic radiograph was taken immediately after the prosthesis was screwed in, and it was observed that the calcifiable cylinder was not well adapted to the left distal mini abutment (Figure 5A). The prosthesis was unscrewed and replaced passively and screwed in again. This time, it was well adapted to all mini abutments (Figure 5B). It is possible to observe the patient's perfect occlusion with the upper total denture and the lower protocol-type denture (Figure 6).



**Figure 1A and 1B:** Clinical image of the patient showing teeth with exposed roots, restorations with different shades from the natural teeth and a removable partial denture in poor condition.



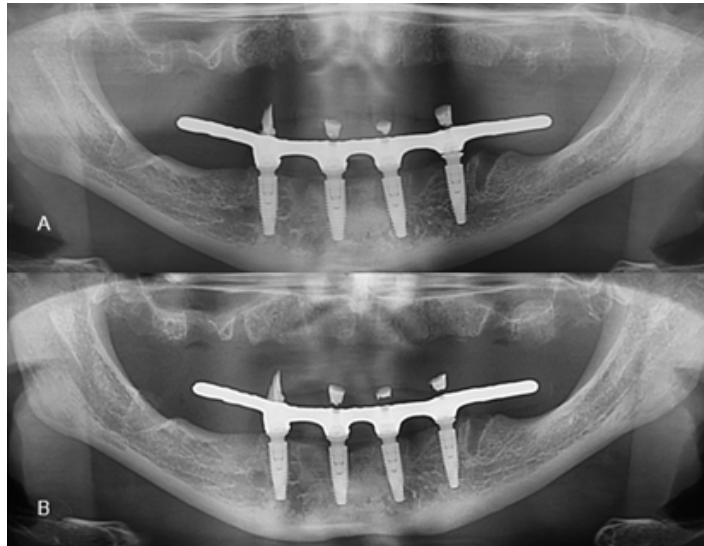
**Figure 2:** Radiographically, bone loss of the upper bone elements and lower incisors, dental extrusion and the presence of inverted dental arches were noted.



**Figure 3:** Intraforaminal cross-sections of computed tomography of the mandible showing bone height and thickness.



**Figure 4:** Wax teeth test.



**Figure 5:** A - panoramic radiograph showing that the left distal calcinable cylinder was not well adapted to the corresponding mini abutment. B - Passive seating of the prosthesis on all mini abutments.



**Figure 6:** It is possible to observe the patient's perfect occlusion with the upper total denture and the lower protocol-type denture.

#### 4. Discussion

In Brazil, tooth loss is directly related to the prevalence of dental caries and periodontal disease, and is one of the biggest public health problems. Studies show that tooth loss affects a significant portion of the Brazilian population, especially older adults. According to the Brazilian Institute of Geography and Statistics (IBGE), approximately 70% of Brazilians over the age of 60 have some degree of tooth loss<sup>4</sup>. The public oral health policy in Brazil,

as part of the Unified Health System (SUS), seeks to reduce the prevalence of oral diseases and, consequently, tooth loss. Access to dental treatments, such as fillings, extractions and implants, as well as the promotion of oral hygiene habits and prevention, are fundamental to combating this problem [2,5]. Seeking to make the dreams of patients who have lost their teeth come true, Neodent, one of the leading dental implant companies in Brazil and worldwide, has been recognized for the quality of its products and

technological innovation. Its dental implants are known for their characteristics that guarantee stability, durability and aesthetics, in addition to having a line of products that meet different clinical and aesthetic needs, offering a safe and effective solution for dental rehabilitation [6]. The design of the Grand Morse implant is specially designed to provide good osseointegration, that is, the union of the implant with the bone. It has a treated surface that favors the adhesion of bone cells, promoting rapid and stable osseointegration. This ease in primary stability is observed in the present case [6]. When the implant is placed in the jawbone, it begins to interact with the bone cells in the area. Titanium, a material widely used in dental implants, has excellent biocompatibility, which means that the body accepts it well and does not reject it [7]. Osseointegration is crucial to the success of dental implants because, without it, the implant would not be stable enough to withstand the forces of chewing, and when the process occurs properly, the implant becomes as stable as a natural tooth. In addition, osseointegration also allows the implant to perform natural functions, such as maintaining the bone structure around the treated area, which can prevent bone resorption that occurs when a tooth is lost [3,7,8]. Patients seeking high-quality dental rehabilitation, as was the case in this study, should seek out partner clinics that use excellent products in their daily routine. This is essential to ensure not only the effectiveness of the treatment, but also its long-term success [7,8]. The use of high-quality materials and implants, such as Grand Morse Neodent implants, which are recognized for their stability, biocompatibility and advanced technology, provides better results in terms of functionality and aesthetics [6].

When choosing a clinic, patients should consider the experience of the dental team, the use of state-of-the-art equipment, as well as the quality of the products used. This ensures that the procedure is performed with the highest level of precision and safety, while also reducing risks and improving the overall patient experience [1, 9]. Furthermore, clinics that are part of partner networks of renowned brands, such as Neodent, often have access to constant updates and specialized training, which further increases the quality of care and patient satisfaction. Trust in the professional and the products used is an essential factor in achieving the desired success in any dental rehabilitation. The patient is currently well and satisfied, and describes that her self-esteem has increased significantly after the dental rehabilitation. This is a common and positive result of dental treatments that restore the functionality and aesthetics of the smile, especially in cases of dental implants. When a patient recovers lost or damaged teeth, not only is their oral health restored, but also their confidence and quality of life.

## 5. Conclusion

Neodent Grand Morse implants are an advanced and versatile solution for dental rehabilitation, providing excellent stability, high osseointegration and durability. Thanks to their connection

design and surface technology, they are ideal for a variety of clinical cases, including immediate loading protocols. In addition, they offer a good balance between quality and cost-effectiveness, which makes them an excellent choice for dentists and patients seeking reliable and long-lasting results.

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