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Case Report

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Associating Zygomatic Implants and the New Dalmolin Anchorage Raphe Palatal (Darp) Technique as Alternative of Quad zygoma and Immediate Loading Rehabilitation of a Severely Atrophic Maxilla: Two Cases Report

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Abstract

Introduction: The rehabilitation of severely atrophic maxillae represents a major surgical and prosthetic challenge, especially when there is a failure of primary stability in conventional or zygomatic anchorages due to low bone density.

Objective: The objective of this work is to describe the DARP technique (Anchorage in the Palatine Raphe), whose purpose is to offer a viable alternative in immediate loading, following concepts already established in existing anchorage techniques, bringing solutions to rehabilitate patients with advanced to severe maxillary atrophy, in which other techniques are not viable, have failed or need complement to assist in the compound torque and provide better biomechanical distribution.

Case Report: Two female patients with severely atrophic maxillae underwent implant-supported rehabilitation involving the DARP technique. The first patient, aged 80 years, had a history of previous implant loss and severe maxillary atrophy. Because one planned zygomatic implant and a pterygoid anchorage could not achieve primary stability owing to poor bone quality, three zygomatic implants (60 N·cm) were combined with a long implant anchored in the palatal raphe using the DARP technique (reported insertion torque: 45 N·cm). A fixed prosthesis was delivered under an immediate-loading protocol 48 hours after surgery with the aid of a multifunctional guide. The second patient, aged 72 years, presented with an existing maxillary implant-supported reconstruction and underwent further rehabilitation planned with three-dimensional imaging. In this case, the DARP anchorage was placed in the palatal midline using a 3.5 × 13 mm implant, at 45° and with an insertion torque of 45 N·cm. The intraoperative records also documented additional maxillary anchorage points with insertion torques of 50, 60, and 80 N·cm, using implants of different dimensions and angulations. Postoperative clinical photographs and panoramic radiography documented the resulting implant-supported rehabilitation.

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Abstract

Conclusion: The two cases illustrate the clinical use of the DARP technique as an additional palatal anchorage strategy in the rehabilitation of severely atrophic maxillae, particularly when the available anatomy requires complementary implant support. These case reports demonstrate technical feasibility in the situations described; further studies and longitudinal follow-up are necessary to establish its predictability, safety, and long-term outcomes.

Keywords: Atrophic maxilla; dental implants; bone anchorage; hard palate; immediate loading on dental implant; biomechanics

Introduction

Severe maxillary bone resorption, often associated with maxillary sinus pneumatization and failure of previous rehabilitative treatments, drastically limits the installation of conventional implants without the use of reconstructive bone grafts [1,2]. Although bone grafting is widely documented in the literature, it has significant disadvantages, such as higher operative morbidity, multiple surgical stages, long treatment time, and high costs [3]. In this context, anchoring techniques in remaining basal bone, such as All-on-4 technique inclined implants, pterygoid implants, Vanderlin technique transnasal implants and Quad Zygoma or hybrid zygomatic implants, have been consolidated as excellent alternatives to enable immediate function [4,5]. However, in geriatric patients or those with localized osteopenia/osteoporosis, even the zygomatic, pterygoid, or piriform opening pillars may have insufficient bone density to ensure the primary stability required for immediate loading [6]. In view of these trans-operative limitations, the basal bone located in the maxillary midline, specifically in the region of the median palatal suture (raphe palate) and the nasal crest, offers a dense cortical volume that has historically been underexplored in total arch rehabilitation dentistry.

The objective of this article is to describe and present, through a clinical case report, the novel technique DARP Dalmolin Anchorage in the Palatine Raphe. The development of the technique had as its primary objective to find a viable alternative for rehabilitation in immediate loading, following biomechanical concepts already established in existing anchorage techniques. The development of the technique had as its primary objective to find a viable alternative for rehabilitation in immediate loading, following biomechanical concepts already established in existing anchorage techniques. It is a simpler, less invasive and faster option, which eliminates bone grafts and reduces operating costs for the surgeon and the patient.

Severe maxillary atrophy presents a complex reconstructive problem because progressive alveolar resorption, sinus pneumatization, and the limited availability of residual bone may compromise the placement of conventional implants and the achievement of predictable primary stability. Zygomatic implants have become an established extra-maxillary anchorage option for selected patients with severely resorbed maxillae, potentially reducing dependence on extensive grafting procedures; nevertheless, treatment planning must account for anatomical variability, surgical access, prosthetic positioning, and the possibility of intraoperative changes [3]. Treatment strategies for the edentulous maxilla increasingly emphasize the use of available native bone and prosthetically driven implant distribution to support fixed full-arch restorations. The All-on-4 concept and related immediate-function protocols illustrate how implant inclination, anteroposterior spread, and rigid splinting may be combined to provide support when posterior bone volume is limited. These principles, however, do not remove the need to assess each proposed anchorage site individually, nor do they guarantee adequate primary stability in severely compromised bone [4].

Zygomatic implant rehabilitation also requires assessment beyond implant survival alone. The quality of the surgical approach, soft-tissue management, prosthetic emergence, hygiene access, and the nature of complications all contribute to the overall outcome. The ORIS criteria and the revisited Zygoma Success Code provide a structured framework for evaluating zygoma-related rehabilitation, underscoring that success should be considered multidimensionally rather than inferred from insertion torque or early prosthetic function alone [7]. Recent clinical literature has described transnasal anchorage as an additional graft less option for selected patients with severely atrophic maxillae. The Vanderlim transnasal protocol combines anterior implants engaging basal bone adjacent to the nasal cavity with posterior zygomatic implants, seeking adequate anteroposterior distribution and primary stability for immediate full-arch rehabilitation. The published report emphasizes three-dimensional planning and anatomical assessment of the nasal and frontonasal regions when selecting the implant trajectory. This approach illustrates the use of alternative anatomical pillars when conventional posterior maxillary support is limited, while remaining dependent on careful case selection [8].

The Vanderlim X-Technique, described as an advanced cross-implant strategy for immediate loading in severely atrophic maxillae. The authors report three clinical cases and discuss the combination of zygomatic and extra-long implants along complementary trajectories to obtain additional anterior and posterior anchorage in challenging anatomical conditions. Their report highlights the importance of three-dimensional planning, anatomical assessment, implant distribution, and prosthetically driven execution. Together, these publications provide a relevant framework for the present report: they document ongoing efforts to expand graft less rehabilitation options through alternative basal-bone anchorage, but do not establish that one configuration is universally applicable or interchangeable with another [9]. The present case describes an intraoperative adaptation in an 80-year-old patient with severe

maxillary atrophy and a history of failed or poorly retained implants. When the planned fourth zygomatic implant and attempted pterygoid anchorage did not achieve mechanical engagement, the surgical team used the available midline palatal basal bone as an additional anchorage site. The Dalmolin Anchorage Raphe Palatal (DARP) technique is presented here as a case-specific adjunct to three zygomatic implants, not as an established replacement for validated techniques. Its rationale, execution, and early prosthetic result are described to support further clinical evaluation of this approach [10].

Clinical Cases Report

Patient history and digital planning Case 01

Female patient H.U.W., 80 years old, Caucasian, presented for clinical evaluation and was referred by her son, a dental surgeon and owner of a radiology clinic. The main complaint involved prosthetic instability resulting from implants previously lost or with poor bone retention. In an initial contact, the professional questioned the feasibility of rehabilitating his mother's case by means of zygomatic implants, since the patient no longer had residual alveolar bone. In the initial clinical examination, standardized extraoral and intraoral photographs were taken for aesthetic evaluation, analysis of lip support, vertical occlusion dimension, and soft tissue condition Initial extraoral clinical aspect of the patient, showing the facial profile and the loss of lip support due to severe maxillary resorption. For the three-dimensional diagnosis, Cone Beam Computed Tomography (CBCT) was performed. The files in DICOM (Digital Imaging and Communications in Medicine) format were exported and converted into three-dimensional meshes in STL (Standard Triangle Language) format for the virtual planning and 3D printing of the anatomical bio model of the maxilla (Figures 1a, b and c). After virtual planning and study of the bio model, it was confirmed that it was a maxilla with severe atrophy (Cawood and Howell Class VI) [11]. Routine blood laboratory tests and preoperative medical evaluation were requested. Since the patient was clinically fit, the procedure was scheduled to be performed in the operating room of the Ji-Paraná Hospital (Rondônia, Brazil).

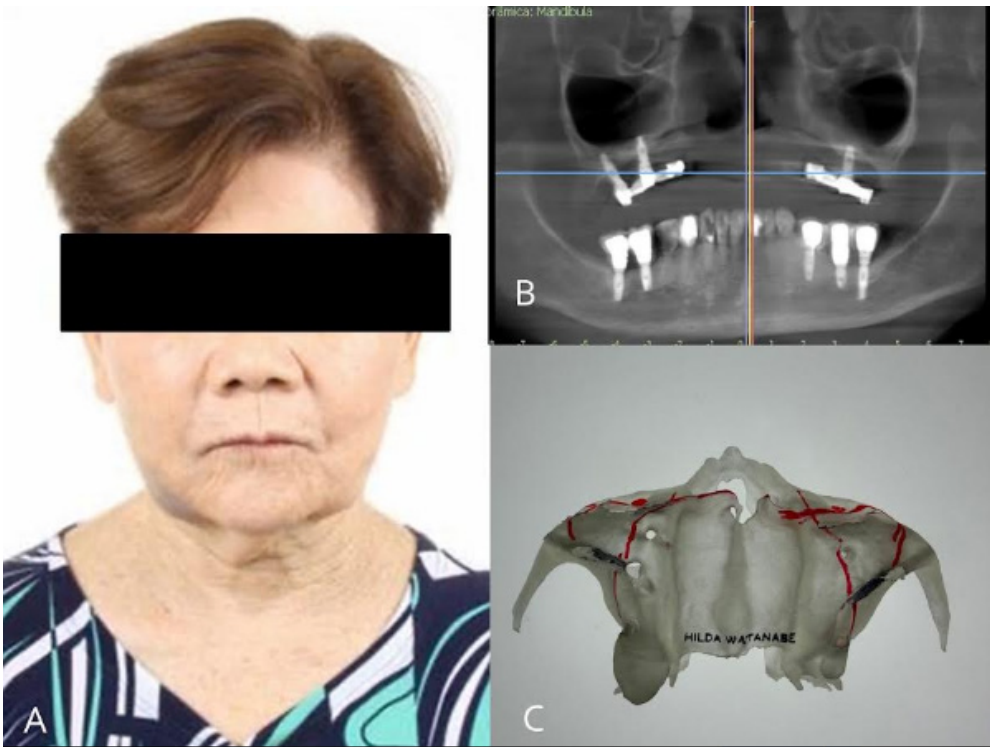


Figure 1: Preoperative records: (A) extraoral facial view; (B) radiographic/CBCT overview of the jaws and existing implants; (C) three-dimensional printed anatomical model used for preoperative assessment.

Surgical procedure and description of the DARP technique

The clinical and radiographic records were reviewed together with the printed maxillary bio model before surgery. The preoperative assessment documented the patient's facial profile, the condition of the remaining dentition and implants, and the available anatomy for planning. The bio model was used as an additional aid for three-dimensional orientation; the final choice of anchorage sites was nevertheless determined by direct intraoperative assessment of bone quality and primary stability. The surgical procedure was conducted under general anaesthesia with nasotracheal intu-

bation, with a total duration of 3 hours. After intra- and extraoral antisepsis, local anaesthetic infiltration with vasoconstrictor, and mucoperiosteal incision, wide mucoperiosteal detachment was removed all failed implants (figure 2) and performed, exposing the anterior wall of the maxilla, the body of the zygomatic bone, the piriform opening, and the palatine vault.



Figure 2: Previously removed implant components and prosthetic parts documented during treatment. The image illustrates the history of compromised implant rehabilitation.

The initial surgical planning ("Plan A") consisted of the installation of four zygomatic implants (Quad Zygoma). However, during milling and installation in the region corresponding to tooth 25, one of the zygomatic implants did not obtain primary anchorage due to the extremely poor and porous bone. Other well-established anchorage techniques were then tried, including the A-Frame, Heisen and Burt approaches, but all of them were unsuccessful due to the low local bone quality, resulting in the absence of locking. Anchorage was also attempted in the pterygoid lamina, but also without mechanical success.

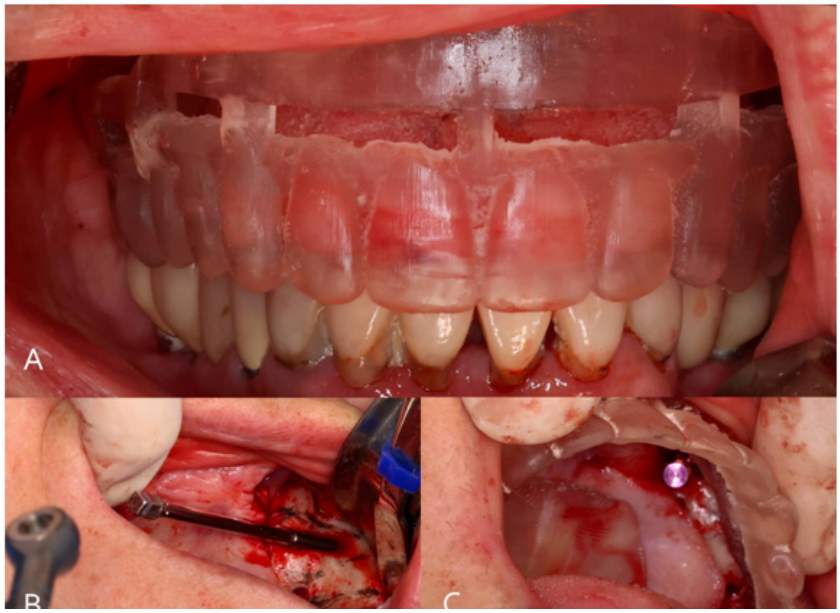


Figure 3: Initial intraoral/prosthetic view and surgical access: (A) anterior occlusal relationship with the prosthetic guide in position; (B–C) intraoperative exposure and visualization of the operative site.

After exposure and assessment of the maxillary bone, the team evaluated the planned anchorage sites and proceeded with the available zygomatic anchorage points. The images show the surgical field, instrumentation and implant components at successive stages (Figure 3). These photographs document the operative steps but, by themselves, do not establish long-term stability or clinical success. In view of the failure of conventional anchorage techniques in that quadrant and the need for a viable alternative to reestablish the prosthetic support polygon and the composite torque for immediate loading (Figure 4), it was observed that the patient had an excellent basal bone volume in the region of the raphe palate. As a last alternative, the DARP technique (Anchorage in the Palatine Raphe) was chosen.

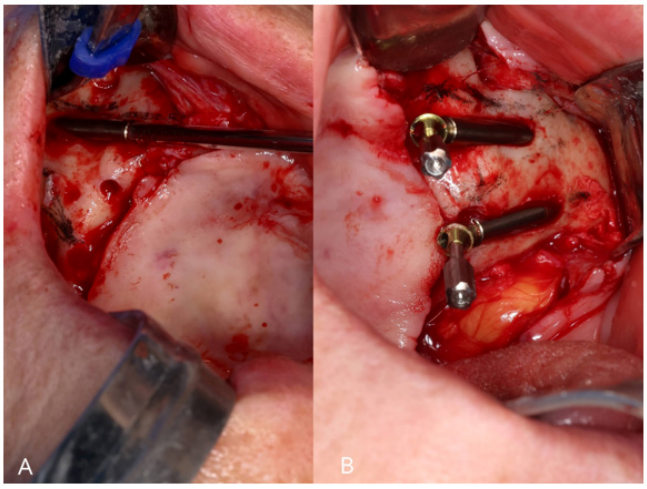


Figure 4: Intraoperative views of the exposed maxillary bone and implant-site preparation, showing the surgical instruments and the operative field during assessment of the available anchorage left and right sides.

The technique consisted of a surgical approach directed to the basal cortical of the midline of the hard palate, seeking structural engagement along the dense bone mass of the palatine raphe (median palatal suture/nasal crest). In the region of element 16, directed to the raphe palate, a long implant (SIN Implant System®, São Paulo, Brazil) of 3.8 × 24 mm was placed. During the installation using the DARP technique, part of the screws remained strategically apparent in the palatal bed before the final settlement in the basal cortical, obtaining excellent primary stability, with a torque of 50 N.cm (Figure 5 a).

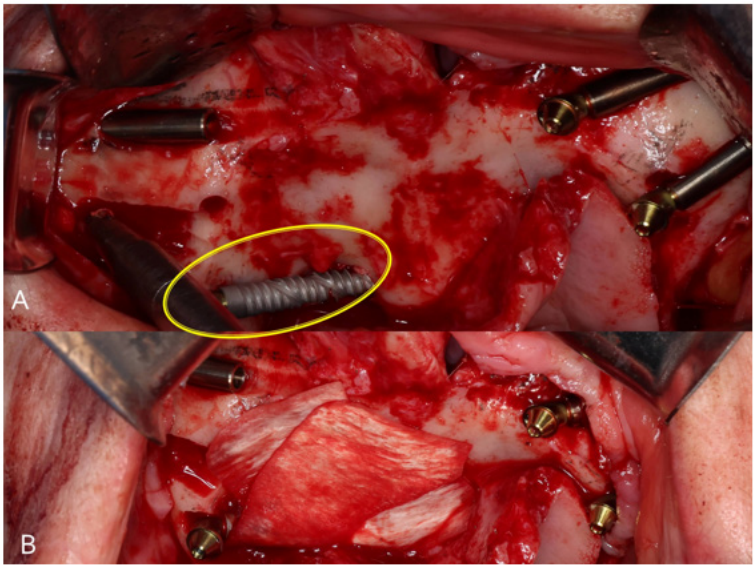


Figure 5: Intraoperative views of implant placement and component positioning at the exposed maxillary anchorage sites after no torque at right side in the most posterior zygomatic implant, applying the DARP technique highlighted at this site to reach the immediate loading.

- 12/13 region: Zygomatic Implant SIN 4.0 × 42.5 mm (Torque: 60 N.cm) + 45° Slim Angled Mini Abutment, 3 mm high.
- 12/13 region: Zygomatic Implant SIN 4.0 × 42.5 mm (Torque: 60 N.cm) + 45° Slim Angled Mini Abutment, 3 mm high.
- 22/23 Region: Zygomatic Implant SIN 4.0 × 42.5 mm (Torque: 60 N.cm) + 45° Slim Angled Mini Abutment, 3 mm high.
- Region 26: Zygomatic Implant SIN 4.0 × 32.5 mm (Torque: 60 N.cm) + 45° Slim Angled Mini Abutment, 3 mm high.
- All implants and multiunit were installed with the continuous aid of the multifunctional surgical guide, which was tested at each operative step to ensure the ideal prosthetic position and the best possible biomechanical distribution (Figure 5 b).

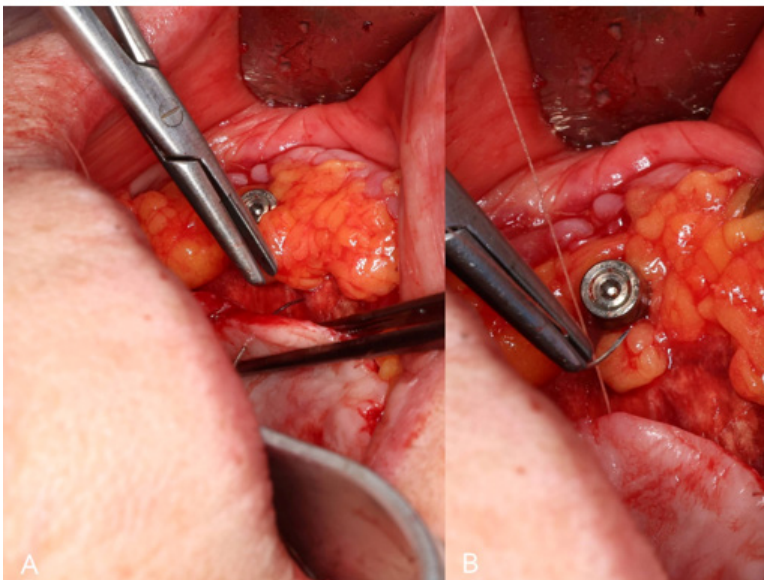


Figure 6: Further intraoperative documentation of the Bichat's Fat exposed at surgical field during completion of the implant-supported soft tissue increasing with this pedicle rotate.

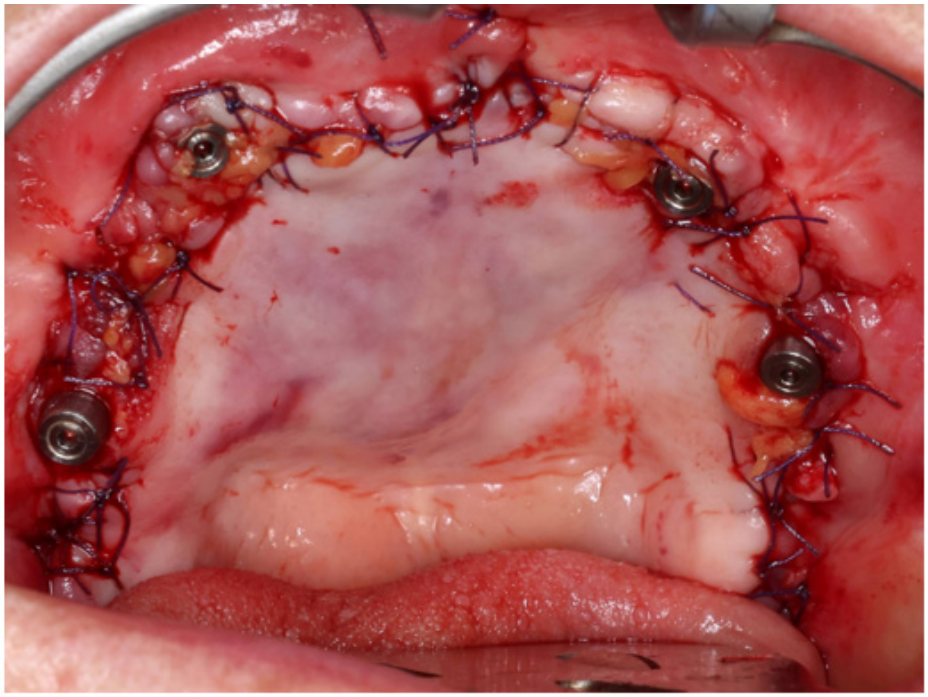


Figure 7: Intraoperative view of the implant components and surrounding tissues before completion of soft-tissue closure.

Prosthetic step and postoperative follow-up

Once the surgical stage was completed, the surgical wound was sutured with absorbable suture. and with fat buccal pad to prevent soft tissue dehiscence in the future (Figure 6 a and b). Subsequently, after closure the transfer moulding was performed using the multifunctional guide and the plaster index was made to confirm the passivity of the prosthetic structure (Figure 7).



Figure 8: Occlusal view of the immediate loading with hybrid resin prosthesis with metal bar.

In the immediate postoperative period, the patient progressed clinically well and without pain complaints. The fixed implant-supported total prosthesis was delivered in an immediate loading protocol 48 hours after the surgical procedure, presenting passive adaptation and reestablishing aesthetics and masticatory function (Figure 8), and a perfect adaptation of the framework in panoramic Rx (Figure 9).



Figure 9: Final panoramic Rx with all components seated and the DARP technique at right side in zone 3 Bone anchorage.

Patient history and digital planning Case 02

The second clinical case is documented through a preoperative panoramic radiograph, digital implant planning records, intraoperative photographs, and postoperative clinical and radiographic images. The initial panoramic examination shows a previously failed rehabilitated maxilla with multiple implant fixtures and a connected prosthetic framework and implant inside sinus problems. These findings provide the radiographic context for the new surgical and prosthetic intervention (Figure 10). As in other full-arch rehabilitations, the assessment of existing implant positions and the available anchorage sites is essential to determine whether the planned prosthetic configuration can be supported by the residual anatomy [2,10].

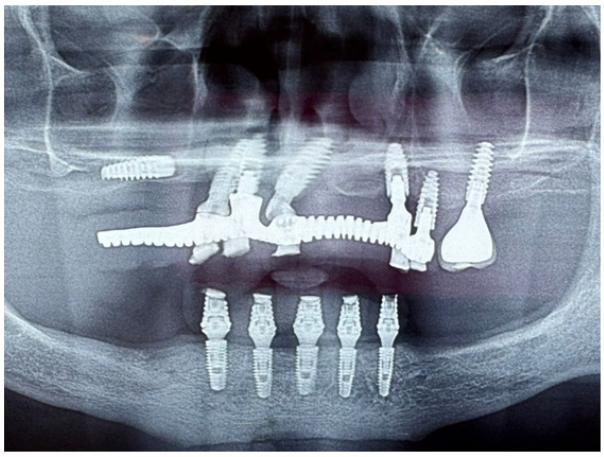


Figure 10: Preoperative panoramic radiograph showing the existing maxillary implant-supported reconstruction failed and the mandibular implant-supported prosthesis in function.

Three-dimensional planning was performed using computed tomography data in DTX Studio Implant. The virtual environment allowed the anatomy to be reviewed in a three-dimensional reconstruction and in a cross-sectional view, with the proposed implant trajectory visualized in relation to the available bone. The planning screenshot specifically identifies a SIN 3.5 × 13 mm implant and illustrates the importance of evaluating its direction and relationship with the surrounding anatomical structures before surgery (Figure 11). Digital planning can support the transfer of prosthetically oriented implant positions to the surgical field; however, the final anchorage strategy must remain subject to direct intraoperative assessment [13,14].

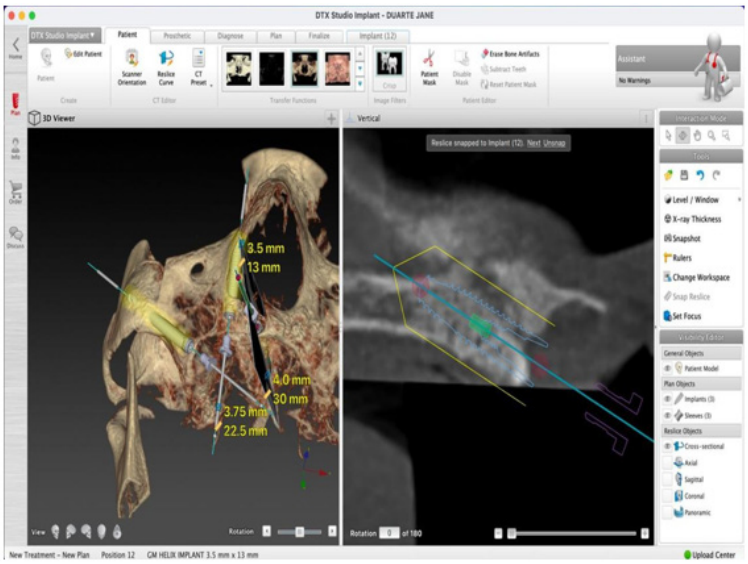


Figure 11: Three-dimensional implant planning in DTX Studio Implant: (A) reconstructed anatomical model with the proposed implant trajectories and dimensions; (B) cross-sectional view illustrating the planned 3.5 × 13 mm implant trajectory in relation to the surrounding bone.

The intraoperative photographs document the exposed maxillary surgical field and the positioning of the implant components. In the central palatal region, the image identifies the DARP anchorage with a SIN 3.5 × 13 mm implant, an angulation of 45° degree multiunit, and an insertion torque of 45 Ncm. This placement is consistent with the principle underlying the Dalmolin Anchorage Raphe Palatal technique: seeking mechanical engagement in the basal cortical bone of the hard-palate midline to provide an additional anchorage point when the conventional distribution of implants requires reinforcement. The image also records other implant anchorage points with insertion-torque annotations of 50, 60, and 80 Ncm (Figure 12 a). The same operative record provides dimensional and angular information for the other implants: SIN 3.8 × 22 mm at 45° degree multiunit, SIN 3.8 × 13 mm at 45° degree multiunit, SIN 3.5 × 30 mm at 60° degree multiunit, and SIN 3.5 × 35 mm at 60° degree multiunit (Figure 12 b). These values are transcribed from the annotations included in the clinical photograph; the image does not provide a sufficiently clear site-by-site map to assign each specification to a precise anatomical position. The arrangement illustrates the use of different implant lengths and inclinations to engage available bone and create a prosthetically useful distribution of support. Such planning principles are consistent with full-arch protocols that emphasize implant spread, inclination, and rigid prosthetic splinting, while recognizing that insertion torque alone does not establish long-term biological success [4,9,15].

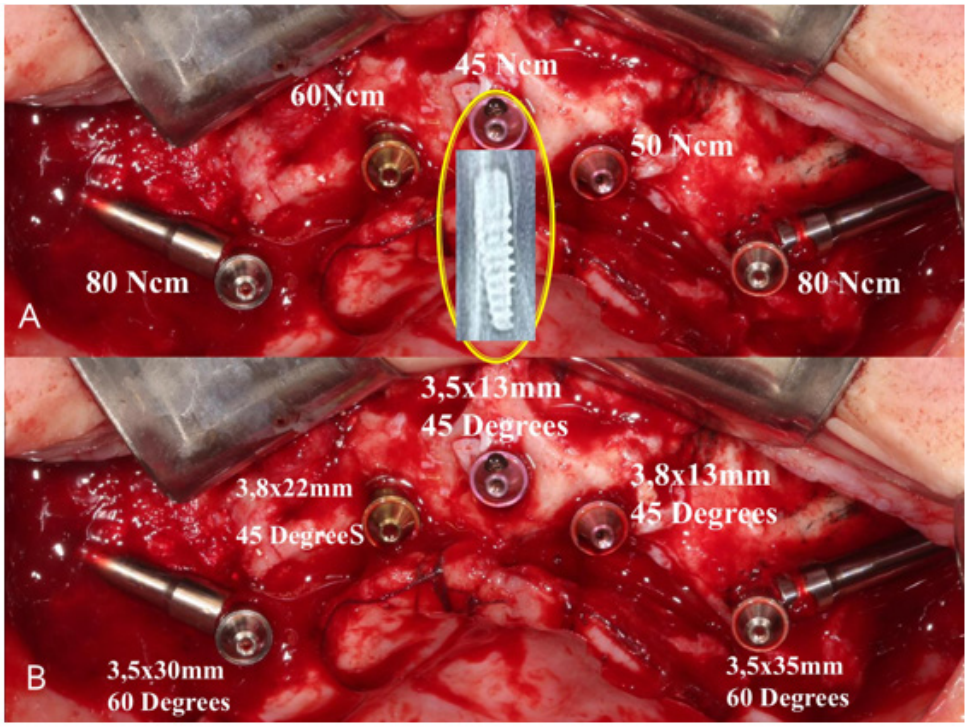


Figure 12: Intraoperative documentation of the maxillary implant configuration: (A) surgical field with the central DARP anchorage identified at 45 N·cm and the insertion-torque values recorded for the other anchorage points; (B) implant dimensions and angulations annotated in the operative image, including the 3.5 × 13 mm DARP implant at 45°.

The postoperative clinical photographs show the patient with the definitive-appearing maxillary and mandibular prosthetic restorations in occlusion, together with an occlusal view of the mandibular arch. The extraoral image documents the facial appearance after rehabilitation, while the intraoral views allow inspection of the prosthetic relationship and the mandibular occlusal surface (Figure 13). These records demonstrate the clinical appearance achieved at the time photographed; because the submitted material does not specify the interval between surgery and prosthesis delivery, the present case description does not assign a time point or classify the protocol as immediate loading.



Figure 13: Postoperative clinical records: (A) extraoral frontal view; (B) frontal intraoral view showing the maxillary and mandibular prosthetic relationship; (C) occlusal view of the mandibular implant-supported prosthesis.

The final panoramic radiograph documents the postoperative implant configuration in both arches. The palatal anchorage associated with the DARP approach is highlighted in the image, allowing its position to be appreciated in relation to the other maxillary implants and the prosthetic framework (Figure 14). Taken together, the clinical and radiographic records support the technical description of DARP as an additional anchorage strategy within a complex full-arch rehabilitation. Nevertheless, as with the first case, these images represent a limited clinical record and do not establish long-term survival, osseointegration, or superiority over alternative anchorage configurations. Outcome assessment should include prosthetic integrity, peri-implant tissues, hygiene access, patient comfort, and serial radiographic evaluation, in keeping with multidimensional criteria for zygomatic rehabilitation [7,16].

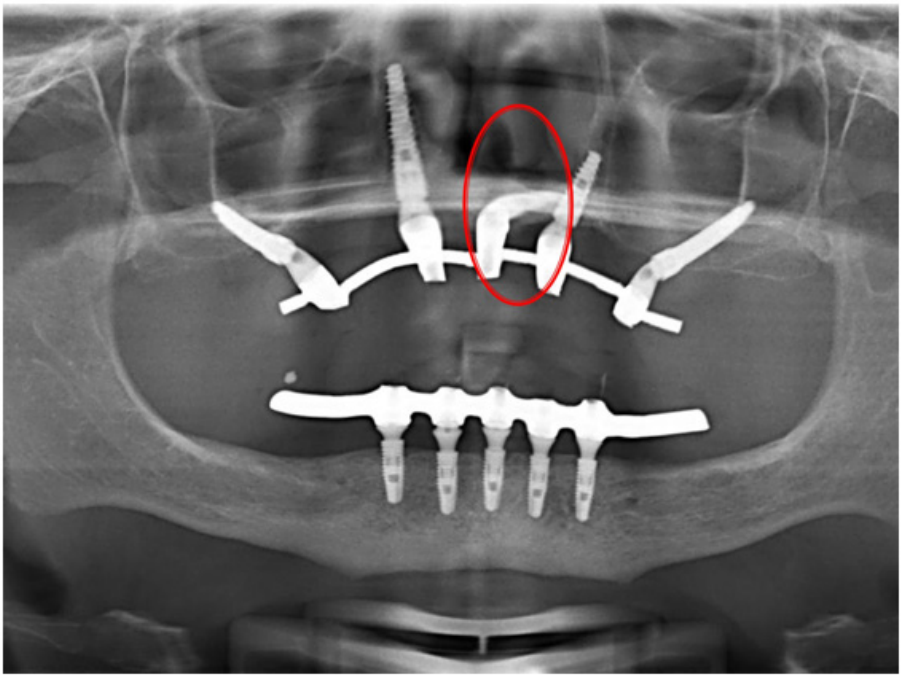


Figure 14: Postoperative panoramic radiograph showing the maxillary and mandibular implant-supported rehabilitations; the DARP palatal anchorage is highlighted in the maxillary midline region.

Discussion

The rehabilitation of elderly patients with severely resorbed maxillae requires the surgeon to have trans operative versatility to overcome primary stability failures caused by osteopenia or bone hypoplasia [6]. In the case reported, although the initial planning foresaw four zygomatic implants (Quad Zygoma), the low bone quality prevented the locking of a second zygomatic implant in the region of 25 and made established manoeuvres unfeasible, such as pterygoid implants and the A-Frame, Heisen and Burt techniques. It is exactly in this critical scenario that the creation of the DARP technique is based. The central objective of the technique was to find a viable alternative in immediate loading, following concepts already established in existing anchorage techniques (search for cortical basal bone, virtualization, implant inclination and rigid splinting), bringing solutions to rehabilitate patients with advanced to severe atrophy, in which the other techniques are not viable, have failed or need complementation to assist in compound torque or better biomechanical distribution.

From an anatomical point of view, the region of the palatine raphe (median palatal suture in union with the palatine process of the maxilla and the inferior nasal crest) is formed by highly cordialized basal bone, which resists physiological resorption after tooth extraction. By anchoring a long implant (3.8 × 24 mm) in this structure, with a torque of 45 N.cm added to the three zygomatic implants locked at 60 N.cm, a high total composite torque of 225 N.cm was achieved. The use of the 52° mini abutment in the region of 16, guided step by step by the multifunctional guide, allowed the prosthetic axis to be perfectly aligned in the arch, ensuring passivity confirmed by the index in delivery in 48 hours. The principal challenge in this case was not simply the absence of alveolar bone, but the inability to obtain primary stability at a planned anchorage site despite a preoperative digital plan. This distinction is clinically important: imaging and biomodels help characterize anatomy and guide implant positioning, but intraoperative bone quality may still differ from the assumptions made during planning. Systematic evaluation of zygomatic implant techniques has documented variation in survival and complication profiles across approaches, supporting the need for surgical flexibility while maintaining careful case selection and complication assessment [10].

The DARP approach was adopted only after the planned fourth zygomatic implant and attempts at alternative posterior anchorage failed to achieve mechanical locking. In this context, the technique functioned as an adjunct intended to restore the support polygon rather than as a predetermined first-line strategy. This is consistent with the broader principle that full-arch rehabilitation should be planned around the available anatomy and a prosthetically appropriate distribution of implants, while retaining a contingency strategy for intraoperative findings [12].

The rationale for seeking engagement in basal cortical bone is biomechanical: primary stability and the distribution of functional loads are central considerations when an immediate-loading protocol is contemplated. However, insertion torque is only one intraoperative indicator and should not be interpreted in isolation as proof of long-term osseointegration or clinical success. Experimental work on early implant stability and bone remodelling demonstrates that implant–bone interactions evolve over time, reinforcing the need to distinguish initial mechanical stability from subsequent biological response [17]. In the reported procedure, the palatal implant was combined with three zygomatic implants and the components were positioned with continuous assistance from a multifunctional guide. The guide supported prosthetic emergence and helped the team evaluate the relationship between implant positions and the planned restoration. Digital and guided workflows can assist coordination between surgical placement and prosthesis fabrication, but their contribution depends on the accuracy of each transfer step and on verification of the final framework fit [13].

The delivery of a fixed prosthesis 48 hours after surgery was possible in this case because the team obtained clinically satisfactory primary stability at the selected sites and verified passive adaptation of the prosthetic structure. Immediate loading should nevertheless be understood as a protocol requiring case-specific evaluation of stability, occlusion, prosthetic rigidity, and patient-related factors. Published principles for immediate implant stability emphasize the importance of a comprehensive assessment rather than reliance on a single torque threshold [15]. An important potential advantage of an additional palatal anchorage point is that it may alter the distribution of support in a maxilla where conventional posterior sites are unavailable or unsuitable. Yet the present report cannot establish whether DARP reduces stress, improves survival, or lowers complication rates compared with alternative configurations. Such claims require biomechanical investigation and clinical follow-up. Finite element studies comparing zygomatic, transnasal, and pterygoid configurations may help formulate hypotheses about stress distribution, although computational findings must be interpreted alongside clinical evidence [18].

The photographic sequence complements the clinical description by documenting the preoperative records, the intraoperative field, implant-component positioning and soft-tissue closure (Figures 1–9). The images should be interpreted as procedural documentation; they cannot substitute for standardized longitudinal clinical and radiographic follow-up. The patient's early postoperative course and the delivery of the prosthesis document technical feasibility in one highly selected clinical situation; they do not establish long-term predictability. Follow-up should include assessment of prosthesis integrity, peri-implant soft tissues, sinus-related symptoms, hygiene access, patient comfort, and radiographic changes where indicated. The ORIS framework is relevant because it encourages a broader definition of success for zygoma-related rehabilitation and discourages judging outcomes solely by whether a prosthesis was delivered or implants remained in place initially [7].

Accordingly, DARP should be regarded as a preliminary technique described through a single case, with important limitations including the absence of a comparator, the short follow-up reported, and the lack of independent validation of its anatomical and biomechanical assumptions. Before broader adoption, studies should define anatomical inclusion criteria, document the implant trajectory and cortical engagement, assess risks to adjacent structures, and report standardized prosthetic and biological outcomes over time. This cautious pathway is consistent with the need to evalu-

ate new anchorage strategies against established evidence and clearly defined outcome measures [16]. The present findings may also be considered in the context of recently published transnasal and cross-implant strategies. The Vanderlim Transnasal protocol describes the use of the nasal and frontonasal basal bone as an anterior anchorage site in combination with posterior zygomatic implants, whereas the Vanderlim X-Technique explores complementary implant trajectories to improve support in severely atrophic maxillae [17,18]. These reports reinforce the principle that rehabilitation should be planned around the available anatomical pillars and the required prosthetic distribution, rather than relying on a fixed implant configuration for every patient. Nevertheless, these techniques should not be interpreted as direct evidence of the predictability of DARP. The cited publications describe different surgical routes and anatomical anchorage concepts, while the present article reports the DARP approach in two clinical cases. The current observations support technical feasibility in the circumstances described, but they do not establish comparative effectiveness, long-term survival, or complication rates. As with transnasal and cross-implant protocols, broader clinical series, standardized anatomical criteria, and longer follow-up will be required to define indications, limitations, and reproducibility of DARP [17,18].

Conclusion

The two clinical cases illustrate the potential use of the DARP technique as an additional palatal anchorage strategy in the rehabilitation of severely atrophic maxillae. The findings support its technical feasibility in the specific clinical situations described; however, they are preliminary and do not establish the long-term predictability, safety, or durability of this approach. Further clinical studies involving a larger number of cases, standardized outcome assessment, and longer follow-up periods are necessary to confirm the longevity of the implant-supported rehabilitations and to better define the indications, limitations, and long-term outcomes of the DARP technique.

Acknowledgement

None.

Conflict of Interest

No conflict of interest.

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