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Volume 4

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2022 - Volume 4

Compendium

Clinique

Cas Cliniques

Mise en charge immédiate sur arcade complète

Tomasz KACZYŃSKI &
Maria ŚWIĄTKOWSKA (Pol)

Un patient de 70 ans se plaint de mobilité dentaire et de soucis esthétiques. Après un examen clinique et radiologique approfondi, un diagnostic de parodontite sévère a été posé. Dans l'arcade supérieure, en raison du mauvais pronostic des dents atteintes sur le plan parodontal, des extractions ont été effectuées suivies d'une pose immédiate des implants. Quatre implants ont été placés et restaurés avec un bridge complet temporaire mis en charge immédiatement. En raison de l'anatomie du sinus maxillaire, l'implant postérieur gauche a été incliné à 30 degrés.

Après 6 mois de cicatrisation sans incident, un bridge définitif en zircone recouvert de porcelaine a été fabriqué et livré. Dans l'arcade inférieure, une thérapie parodontale non chirurgicale a été réalisée en considérant que le pronostic dentaire était favorable.

Ce cas présente une MCI exécutée avec succès avec une restauration implanto-portée fixe chez un patient atteint de parodontite sévère. C'est une option de traitement viable pour ce profil de patient et qui offre les bénéfices d'une mise en fonction immédiate, une esthétique correcte et une durée de traitement réduite. Cependant, la sélection de cas appropriés est essentielle pour obtenir des résultats positifs avec ce type de procédure.

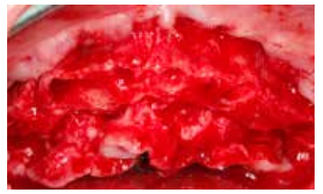
Full arch immediate loading rehabilitation

A 70 years old male patient presented with chief complaint of teeth mobility and esthetic concerns. Following thorough clinical and radiological examination a diagnosis of severe periodontitis was made. In the upper arch due to poor prognosis of periodontally involved teeth, extractions were performed followed by immediate implant placement. Four implants were placed and restored with immediate function temporary full arch bridge. Because of the anatomy of the maxillary sinus, the left posterior implant was tilted at 30 degrees. After 6 months of uneventful healing, a definitive zirconia bridge with facial cutback and veneered with porcelain was delivered. In the lower arch non-surgical periodontal therapy was carried out considering favorable teeth prognosis.

This case presents a successfully performed immediate function with fixed implant supported restoration in a patient with severe periodontitis. It is a viable treatment option for patients with hopeless dentition that provides immediate function, aesthetics and reduced treatment time. However, proper case selection is essential for achieving successful outcomes.

Situation initiale intraorale / Initial intraoral status

Sourire initiale / Initial smile aesthetics



Crête alvéolaire après extraction, lambeau et alveoplastie / Alveolar ridge after teeth extraction, flap reflection and alveoplasty

Implants avec piliers coniques en place / Implants with attached multi-unit abutments

Vue occlusale des piliers coniques / Occlusal view of multi-unit abutments

Radio post-op. / Post-op x-ray

MCI avec prothèse provisoire fixe / Immediate function fixed implant supported restoration

Sourire avec la prothèse provisoire en place / Smile aesthetics of temporary restoration

Profil concave des tissus mous cicatrisés /Concave healed soft tissue profile

Prothèse d'usage en Zircone monolithique / Monolithic zirconia restoration with veneered cutback – convex gingival contours

Vue occlusale de la prothèse d'usage / Monolithic zirconia restoration with veneered cutback – occlusal view

Prothèse d'usage en bouche / Intraoral view of final restoration

Sourire du patient avec la prothèse d'usage / Smile aesthetics of final restoration

Extraction et greffe avec utilisation d'une maille titane

Dr Anne TIBIE-BACHELLERIE (83)

La patiente vient me consulter afin de savoir si une alternative à un appareil dentaire amovible est possible pour ses dents du haut à droite, sachant qu'elle a un manque d'os avéré. Après examens clinique et radiologique, je lui propose une greffe d'apposition osseuse avec du BIOBank et une grille en titane maintenue par des vis et la pose de ses implants 4 mois après la greffe d'apposition et enfin la réalisation de sa prothèse 3 mois après la pose des implants.

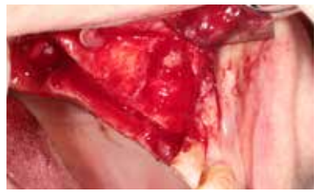
La réalisation d'une greffe d'apposition par un substitut osseux allogénique type BIOBank, fonctionne. Le maintien par une grille titane permet de limiter la résorption osseuse par l'immobilisation et le maintien de l'espace entre les tissus mous et le BIOBank. Même si l'os autogène reste le gold standard, le rapport risque bénéfice pour le patient reste très intéressant avec un gain osseux très satisfaisant et une moindre intervention.

Extraction followed by a bone graft together with a titanium mesh

The patient consulted me to find out if an alternative to a removable prosthesis is possible for her upper right teeth, taking into consideration that she has an important bone defect. After clinical and radiological examinations, I proposed her to proceed to a bone apposition graft with BIOBank and a titanium mesh maintained by screws and to the placement of implants 4 months after the apposition graft, and finally to proceed to the realization of the prosthesis 3 months after implant placement.

Performing an apposition graft using an allogeneic BIOBank-type bone substitute worked well. The support provided by the titanium mesh limited the bone resorption by immobilizing and maintaining the space between the soft tissues and the BIOBank. Even if autogenous bone remains the gold standard, the risk-benefit ratio for the patient remains very interesting with very satisfactory bone gain and less intervention.

Bridge mobile de 13 à 17 / 13 to 17 bridge mobility

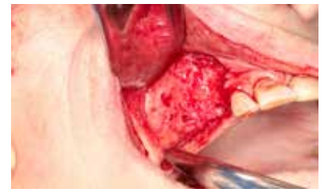


Lambeau et extraction / Bone flap and extraction

Comblement Biobank avec maille titane / Biobank Graftig together with a titanium mesh

Cicatrisation à 3 mois / Healing at 3 months

Situation à la réouverture / situation after re-opening



Augmentation osseuse vascularisée / Vascularised bone augmentation

Forages pilotes en vue du placement de 5 implants In_Kone / Pilot drill for placement of 5 In-Kone Implants

Complément Biobank après retrait de la maille pour prevenir la résorption osseuse / Biobank complement to compensate the bone resoption after mesh removal.

Situation 2 mois post-opératoires / Situation two months after surgery

Prothèse d'usage scellée / Cemented final restauration

Reconstruction osseuse avant pose d'implant et MCI unitaire

Dr Yann LE PAUTREMAT (17)

Une patiente âgée de 39 ans se présente en consultation car elle se plaint de douleurs et de sensation de mobilité sur la 21. Un an avant notre première consultation, une résection apicale a été réalisée sur cette dent par un confrère.

Le questionnaire médical révèle la présence d'une anémie supplémentée par du gluconate de fer à raison de 14m/jour, une carence en vitamine B12 supplémentée par la prise d'une ampoule de 100 000 UI/2ml/jour, ainsi qu'une prise de vitamine D3 à raison d'1 ampoule de 100 000 UI/2ml 1/mois. L'examen endobuccal révèle la présence d'une fistule en vestibulaire et d'une mobilité de type 2. Le sondage parodontal indique la présence de poches en mésial et distal de cette dent d'une profondeur de 7 à 8 mm. Le CBCT montre la présence d'une lésion infectieuse en apical de la 21, avec fenestration osseuse de la table vestibulaire.

La traitement est réalisé en plusieurs interventions. Nous procédons à l'extraction de la 21, levée de lambeau vestibulaire avec décharges verticales en mésial de 11 et distal de 22 et décollement du lambeau palatin. L'assainissement général de la zone est réalisé avec exérèse des tissus inflammatoires et des résidus de biomatériaux de comblement fibrosés. Mise en place d'une membrane Creos® 20/30 (Nobel Biocare®) fixée par 2 pin's dans la partie apico-vestibulaire et comblement osseux avec de l'os de banque BioBank®. Positionnement et découpage de la membrane en palatin. Enfin, suppression des tensions gingivales et sutures avec du fil résorbable 4/0.

Pendant une temporisation de 5 mois et demi, un contrôle de cicatrisation à 3 mois par CBCT est réalisé. Un implant In-Kone Ø 3.5 – lg 8.5 mm est alors mis en place. Réalisation d'une couronne provisoire transvissée en composite à partir d'un pilier provisoire ht.3 mm. Cette dent est placée en sous-occlusion. La prothèse de convenance sera réalisée par le correspondant 4 mois après la pose de l'implant.

Bone reconstruction before single implant placement with immediate loading

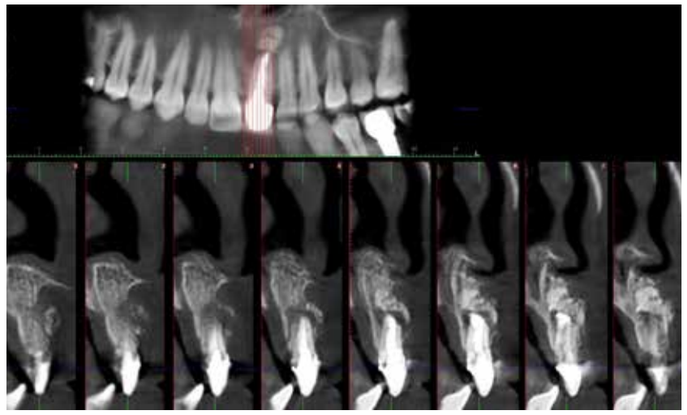
A 39-year-old patient came for a consultation because she complained of pain and a feeling of mobility on the 21. One year before our first consultation, a colleague who had previously, performed an apical resection.

The medical questionnaire reveals the anemia supplemented with iron gluconate at a rate of 14m / day, a vitamin B12 deficiency supplemented by the intake of an ampoule of 100 000 UI/2ml/day, as well as an intake of vitamin D3 at a rate of '' 1 ampoule of 100,000 IU / 2ml 1 / month. The intraoral examination reveals the presence of a vestibular fistula and type 2 mobility. Periodontal probing indicates the presence of a pocket mesial and distal of this tooth with a depth of 7 to 8 mm. CBCT shows the presence of an infectious lesion at the apical end of the 21, with a bone fenestration of the vestibular table.

The treatment is carried out in several interventions. We proceed to the extraction of the 21, lifting of the vestibular flap with vertical discharge mesial of 11 and distal of 22 and detachment of the palatal flap. We proceed to general preparation of the area, with excision of inflammatory tissues and residues of fiber-containing bio-fillers. Placement of a Creos® 20/30 membrane (Nobel Biocare®) fixed by 2 pins in the apico-vestibular part and bone filling with bone from BioBank® bank. Positioning and cutting of the palatal membrane. Finally, removal of gingival tensions and sutures with absorbable 4/0 thread.

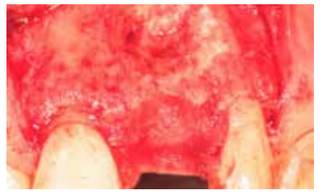
After a delay of 5 and a half months, a healing control at 3 months by CBCT is performed. An In-Kone Ø 3.5 - length 8.5 mm implant is then placed. Creation of a temporary screw-retained composite crown from a temporary abutment ht. 3 mm. This tooth is placed occlusion. The prosthesis of convenience will be performed by the correspondent 4 months after placement of the implant.

Photo pré-opératoire / Initial situation

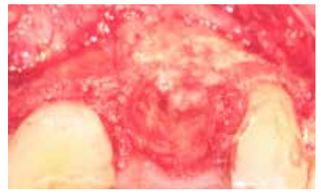


Radio pré-opératoire / Inital radiography

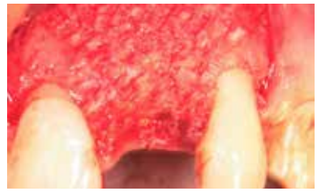
Fenestration vestibulaire / Vestibular fenestration



Assainisement de la zone / Cleaning of the site



Alvéole d'extraction / Extraction socket



Comblement osseux Biobank® / Biobank® Bone graft

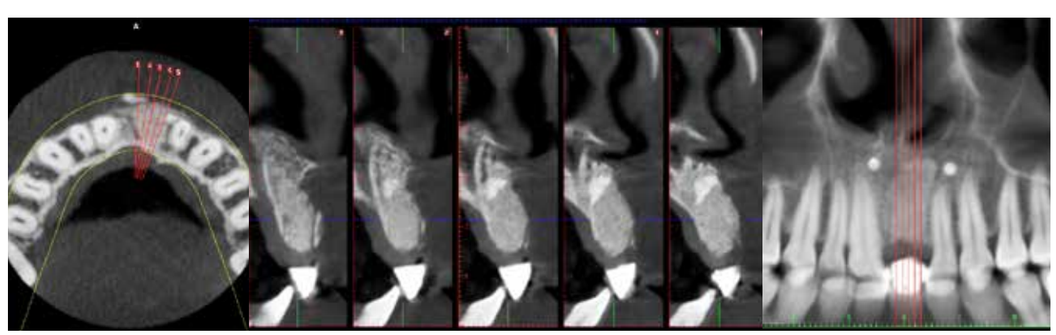
Pose de la membrane / Membrane covering

Prothèse provisoire / Provisional prosthesis

Vue occlusale / Occlusal view

Ouverture à 5 mois / Re-opening at 5 months

Implant unitaire avec mise en esthétique / Single unit implant in immediate loading



Scan post-opératoire 5 mois/ Radiography at 5 months

Traitement d'agénésie par implants dentaire en 12 et 22

Dr Waël GANDOUR (01)

Jeune homme, 20 ans adressé par son orthodontiste pour agénésies de 12, 22.

Perte osseuse conséquente avec forte concavité vestibulaire. La présence de la paroi corticale palatine est de bon pronostique pour la ROG.

Dépose des dents provisoires collées sur son arc orthodontique. Incision sulculaire sans décharge.

Suture d'une membrane résorbable au lambeau palatin, sticky bone bioBANK S-PRF, recouvrement et stabilisation de la membrane par deux pins vestibulaires.

Réouverture à 6 mois et implantation. Pose de 3 In-Kone dia. 3.5 x 13 mm avec vis de cicatrisation dia. 5 mm et greffe conjonctive (prélèvement tubérositaire). Prise d'empreinte et réalisation des provisoires en M.E.I. (mise en esthétique immédiate) à 7 jours.

3 mois post-op, prise d'empreinte personnalisée afin d'enregistrer le profil d'émergence des prothèses provisoires. Personnalisation réalisée en technique « hors bouche ».

Fabrication des CCM transvissées par le laboratoire IOL (Lyon) sur base de Faux-moignon standard et pose 15 jours après.

Visite de contrôle à 9 mois avec maturation gingivale malgré le contrôle de plaque approximatif. Radio retro-alvéolaire de contrôle à deux ans avec niveau osseux stabilisé.

Agenesis treatment with dental implants in 12 and 22

A young man, 20 years old is referred by his orthodontist for agenesis of 12, 22.

The patient suffers a substantial bone loss with strong vestibular concavity. The presence of the palatal cortical wall is a good prognosis for GBR.

After removal of the provisional teeth, we proceed to sulcular incision without discharge.

Suture of an absorbable membrane to the palatal flap, followed by a sticky bone bioBANK S-PRF. covering and stabilization of the membrane with two vestibular pins.

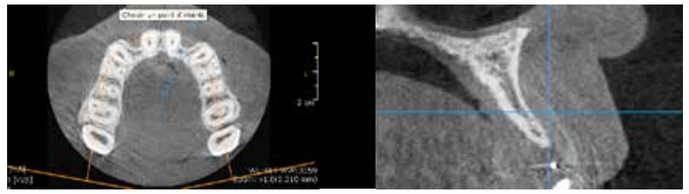
Reopening is performed at 6 months for implantation. Placement of 3 In-Kone dia. 3.5 x 13 mm with healing screw dia. 5 mm and connective grafting (tuberosity harvest). 7 days later, impression taking and realization of temporary prosthesis in immediate loading.

At 3 months post-op, a personalized impression is taken to record the emergence profile of the provisional prostheses. The personalization is carried in out off-mouth in technique.

Screw-retained CCMs are fabricated by the IOL laboratory (Lyon) on the basis of standard dummy stumps and installed 15 days later.

Check-up at 9 months with gingival maturation despite approximate plaque control.

Control retro-alveolar radio after two years with stabilized bone level.



Radio initiale / Initial radiography

Situation initiale / Initial situation

Vu du site à l'ouverture / Site after flap

Technique du Sticky Bone / Sticky bone technique

Membrane résorbable / Resobable membrane

Fermeture du site / Suture of the site

Cicatrisation à 6 mois / Healing at 6 months

Volume osseux / Bone volume

Pose des implants en un temps chirurgical / One surgical time implants placement

Prise d'empreinte / Impression taking

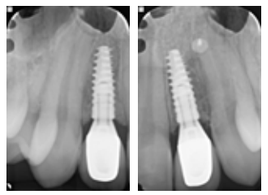
Vue de l'intrados avec transferts personnalisés / Intrados of the impression

Pose de la prothèse provisoire / Provisionnel prosthesis

Vue vestibulaire / Vestibular view

Jour de la pose / Final prosthesis in mouth

Profil patient / Profile of the patient



Radio à 2 ans / Radiographies at 2 years

Prothèse d'usage à 2 ans / Final prosthesis after 2 years

Implant post-extractionnel avec mise en esthétique immédiate sur une 11 et traitement des récessions 11, 12 et 13 avec greffe conjonctive palatine

Dr Alfredo GONZÁLEZ (Esp)

Une patiente de 47 ans sans antécédent, non-fumeuse, avec bonne d'hygiène bucco-dentaire nous consulte à cause d'une gêne vestibulaire lors de la mastication ainsi qu'une insatisfaction esthétique quant à la coloration de sa muqueuse au niveau de son incisive centrale.

Après examens clinique et radiographique, nous observons la présence de caries au niveau de la 11, plusieurs récessions muco-gingivales au niveau des 11-12 et 13 (env. 3 mm au niveau de la 11 par rapport à la 21), une récession Miller classe 1 et absence d'abcès vestibulaire.

L'analyse radiographique montre la présence d'une reconstruction endodontique ancienne sur la 11 (sur tenon), une lésion granulomateuse chronique à l'apex de la 11 affectant l'intégrité de la table osseuse vestibulaire sans manifestation au niveau des tissus mous, un volume osseux compatible avec la pose d'un implant en chirurgie post-extractionnelle et mise en esthétique immédiate et enfin, des papilles osseuses préservées entre 11 et 21 et entre 11 et 12.

Le plan de traitement suivant est proposé : Extraction de la 11, exérèse du kyste présent dans l'alvéole, mise en place immédiate d'un implant In-Kone dia 3.5 x Lg 4 mm, comblement de l'alvéole (hiatus sup. à 3 mm) avec de l'allogreffe minéralisée cortico spongieuse, fabrication in-situ et mise en place d'une prothèse immédiate le jour même avec de la résine acrylique sur pilier titane ht. 4 mm. Enfin correction de la décompensation gingivale entre 11 et 21 et traitement des récessions sur 12 et 13 avec greffe conjonctive prélevée dans la région palatine.

Post-extraction implant with immediate loading on 11 and treatments of recesssion on 11, 12 and 13 with connective grafting

A 47-year-old patient with no medical background, non-smoker, with good oral hygiene, consults us because of vestibular discomfort during chewing as well as aesthetic dissatisfaction with the coloration of the mucosa on her central incisor.

After clinical and radiographic examination, we observe the presence of caries at the level of 11, several mucogingival recessions at the level of 11-12 and 13 (approx. 3 mm at the level of 11 compared to 21), a Miller recession class 1 and absence of vestibular abscess.

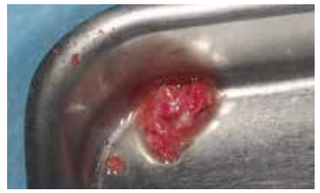
Radiographic analysis shows the presence of an old endodontic reconstruction on 11 (on post), a chronic granulomatous lesion at the apex of 11 affecting the integrity of the vestibular bone table without manifestation at the soft tissue level, a bone volume compatible with the placement of an implant in post-extraction surgery and immediate loading and finally, bone papillae preserved between 11 and 21 and between 11 and 12.

The following treatment plan is proposed: Extraction of 11, excision of the cyst present in the socket, immediate placement of an In-Kone implant dia 3.5 x Lg 4 mm, filling of the socket (hiatus sup. 3 mm) with mineralized cortico-cancellous allograft, in-situ fabrication and placement of an immediate prosthesis the same day with acrylic resin on a titanium abutment ht. 4 mm. Finally, correction of gingival decompensation between 11 and 21 and treatment of recessions in 12 and 13 with connective tissue graft taken from the palatal region.

Défaut esthétique entre 21 et 11 / Offset of the gingival level beween 11 and 21

Controle du volume osseux vestibulaire / Vestibular bone volume control

Forage palatin / Palatal drilling



Os autologue / Autologous bone

Comblement vestibulaire / Vestibular grafting

Mise en place de l'implant / Implant placement

Vérification de la stabilité primaire (Ostell>65) / Primary stability control (Ostell>65)

Position 3D de l'implant / 3D implant position

Préparation à la correction du défaut muco-co-gingival / Mucosal correction preparation

Vue du faux-moignon ht. 4 mm / 4mm abutment view

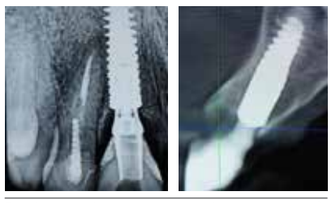
Prothèse provisoire immédiate en place / Immediate provisional crown

Repérage du niveau gingival souhaité / Gingival expected level evaluation

Marcage de la ligne gingivale souhaitée / Expected mucosal level marking

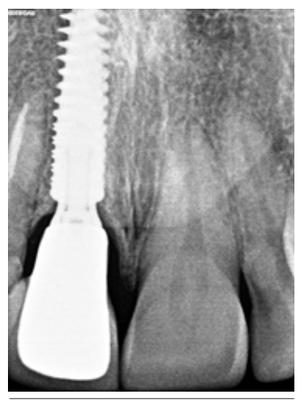
Greffe conjonctive palatine par tunnelisation / Connective grafting (tunnel technique)

Sutures / Sutures



Radiographies avant et après traitement / Radiographies before and after treatment

Résultat à 1 semaine / Result at one week



Radio à 2 ans / Radiography at two years

Résultat à 2 ans / Results at two years

Extraction implantation d'une incisive centrale

Dr Geoffroy BOISSIERE (69)

Une patiente de 60 ans consulte au cabinet pour une mobilité terminale de l'incisive supérieure droite. Après anamnèse, examen clinique et radiologique, cette 11 est fracturée déjà depuis plus d'une trentaine d'années. Nous décidons de réaliser une extraction implantation et mise en esthétique.

Le jour de l'intervention, l'extraction est réalisée de manière à préserver les papilles. Le tissu de granulation inflammatoire est cureté. La totalité de l'intervention est réalisée sans lambeau. Le forage palatin tout en restant dans le couloir prothétique est important pour la réalisation de la couronne mais aussi pour assurer une distance suffisante de la corticale vestibulaire.

Un implant de diamètre 4 longueur 13mm est mis en place. L'enfouissement de l'implant est primordial à cette étape, le col implantaire doit être situé au moins à 3 mm du collet des dents adjacentes. Cette hauteur gingivale correspond à l'espace biologique et permet avec un pilier provisoire direct implant en titane de gérer le profil d'émergence optimal pour un résultat esthétique et biologiquement favorable. Le design de la couronne provisoire ainsi que les finitions permettront une cicatrisation rapide sans inflammation des tissus mous.

Le gap vestibulaire est comblé avec de l'hydroxyapatite d'origine bovine. Dans ce cas précis un apport de conjonctif n'est pas nécessaire car la patiente présente un phénotype épais.

Après les 4 mois de cicatrisation la couronne provisoire est déposée et une empreinte pop-up permet de transmettre au prothésiste la position de l'implant ainsi que le profil d'émergence. L'examen radiologique à 5 mois nous permet de visualiser le remodelage osseux autour du col de l'implant et la stabilité des tissus péri-implantaires.

Immediate implant placement of a central incisor

A 60-year-old patient consulted in the clinic for terminal mobility of the upper right incisor. After anamnesis, clinical and radiological examination, this 11 fractured more than thirty years ago. We decide to carry out an extraction with immediate implantation and provisionalization.

On the day of the operation, the extraction is performed atraumatically to preserve the papillae. Inflammatory granulation tissue is curetted. The entire surgery is performed flapless. Palatal drilling while remaining in the prosthetic corridor is important for the realization of a screw-retained crown but also to ensure a sufficient distance from the vestibular wall.

An In-kone implant with a diameter of 4 and a length of 13mm is placed. The vertical position of the implant is essential at this stage: the neck is located at least 3 mm from the cementum enamel junction of the adjacent teeth. This transgingival height corresponds to the biological width and allows, with a direct temporary titanium implant abutment, to manage an optimal emergence profile for an aesthetic and biologically favorable result. The design and the final polishing of the temporary crown will allow fast healing without any soft tissues inflammation.

The vestibular gap is filled with bovine hydroxyapatatite. In this specific case, a connective tissue supply is not necessary because the patient has a thick phenotype.

After 4 months of healing, the temporary crown is removed, and a pop-up impression is used to send the prosthetist implant position and as well the emergence profile. The radiological examination at 5 months allows us to visualize the bone remodeling around the neck of the implant and the stability of the peri-implant tissues.

Situation initiale / Initial situation

Extraction atraumatique / Atraumatic extraction

Forage de l'alvéole / Drilling of the socket

Mise en place de l'implant / Implant positionning

Comblement vetibulaire / Vestibular filling

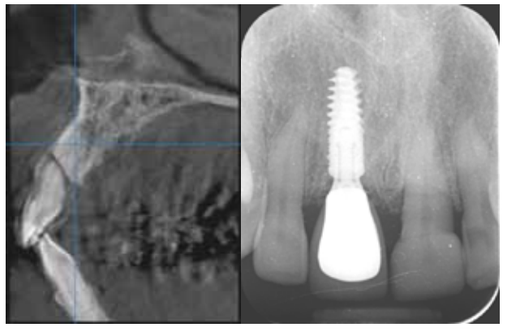
Vue prothèse provisoire / Provisionnal prosthesis

Vue occlusale de la couronne provisoire / Occlusal view of the provisional crown

Profil d'émergence à 4 mois / Emergence profile at 4 months

Vue de face à 4 mois/ Frontal view at 4 months

Vue couronne d'usage / Final crown



Radio initiale et à 5 mois / Initial radiography and at 5 months

Choix d'un traitement

Dr. Nicolas MOHENG (13)

En 2002, un garçon de 8 ans se présente en consultation pour un problème esthétique. La 11 présente une couronne double et la 12 est linguale. 3 solutions sont envisagées :

1/ conserver la 11 en modifiant son anatomie et extraire la 12 palato-versée.

2/ extraire la 11 précocement ce qui entrainerait une grosse perte osseuse et mettrait la 12 en péril et faire un bridge mutilant les dents voisines.

3/ extraire la 11 par égression orthodontique pour conserver la 12, la repositionner et poser un implant aprés la fin de la croissance. C'est la solution choisie.

L'orthodontiste met en place un appareil multi-bagues pour égresser la 11 en 2005. La 11 est extraite en décembre 2006. Le traitement continue pour positionner la 12 et aligner les autres dents. Un appareil amovible remplacera la 11 en octobre 2007 et maintiendra l'espace en attendant la fin de la croissance.

Nouvel appareillage ortho avec collage de la 11 sur l'arc et fin de la croissance. La phase implantaire peut alors débuter après une étude radio qui fait état d'une épaisseur osseuse diminuée indiquant une greffe osseuse lors de la pose de l'implant In-Kone 3,5 x 13 mm en technique enfouie.

3 mois PO la réouverture est effectuée et une gingivectomie est réalisée sur la 21, la dent provisoire est recollée à l'arc. 2 jours après une dent provisoire sur moignon court est posée. Pose de la dent définitive à T + 11 ans et conservation de toutes les dents à l'exception de la 11.

Choice of treatment

In 2002, an 8-year-old boy presented for a consultation with an aesthetic problem. The 11 has a double crown and the 12 is lingual. 3 solutions are considered:

1 / keep the 11 by modifying its anatomy and extract the palatal 12.

2 / extract the 11 now, which would cause a large bone loss and put the 12 in danger and make a bridge mutilating the neighboring teeth.

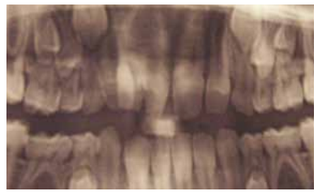
3 / extract the 11 by orthodontic extrusion to keep the 12, reposition the latter and place an implant after the end of growth. This is the chosen solution.

The orthodontist put in place a multi-band appliance to remove the 11 in 2005. The 11 was extracted in December 2006. The treatment continues to position the 12 and align the other teeth. A removable device will replace the 11 in October 2007 and will maintain the space while waiting for the end of the growth.

New ortho fitting with bonding of the 11 on the arch until end of the growth. The implant phase can then begin after a radio study which reports a reduced bone thickness indicating a bone graft during the placement of the In-Kone 3.5 x 13 mm implant in the buried technique.

3 months post-op reopening is performed and a gingivectomy is performed on 21, the provisional tooth is reattached with the arch. 2 days later a temporary tooth on a short stump is placed. Placement of the final tooth at T + 11 years and conservation of all teeth except 11.

Situation initiale / Initial situation

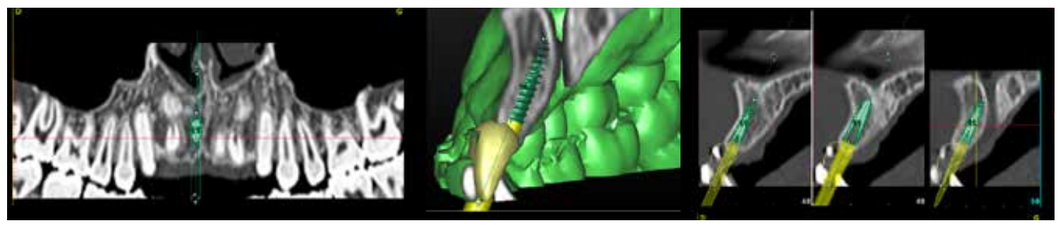


Radio de départ / Initial radiography

Egression de la 11 / Egression of 11

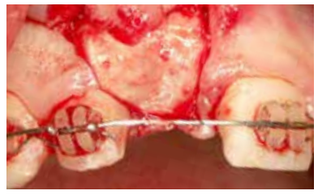
Extraction de la 11 / Extraction of 11

Fin de croissance / End of growth

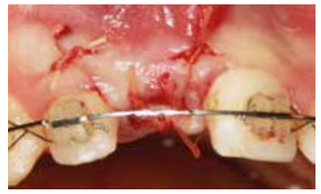


Radio pré-implantaire / Radiography before impalnt placement

Pose de l'implant / Implant placement



Greffe osseuse / Bone graft



Mise en nourrice de l'implant / Burying of the implant

2e temps chirurgical à 2 mois / 2nd srugical time at 2 months

Dent provisoire collée à l'arc / Fixed provisional teeth

Mise en place du faux-moignon / Abutment in place

Dent provisoire sur faux-moignon / Provisional crown

Dent provisoire après cicatrisation / Provisional crown after healing

Dent provisoire à T+11 ans / Provisonal 11 years later

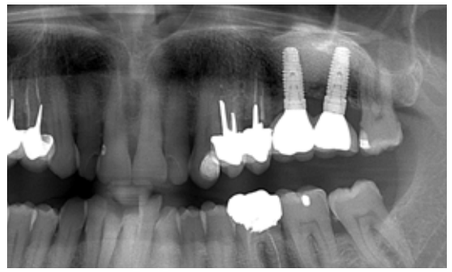
Greffons radiculaires une alternative fiable aux comblements illustration avec la réhabilitation d'une prémolaire

Dr Renaud GIRIEUD (13)

Un homme de 71 ans se présente en consultation pour des douleurs sous une coiffe en 25. Apres examen clinique, la racine s'avère perdue. Le patient sera traité en extraction-implantation avec un implant In-kone Ø 4 x11,5 mm. La 3D nous révèle un important défaut osseux vestibulaire qui sera compensé par l'apposition de greffons radiculaires issus de la dent extraite sans ajout de matériau de comblement. Nous recherchons l'ankylose des greffons radiculaires et l'induction d'une néoformation osseuse en regard. Le cone beam à 12 mois post-op nous permet d'apprécier la qualité et la stabilité de la régénération osseuse obtenue.

Tooth-derived bone graft material, a reliable solution illustrated on a molar rehabilitation

A 71-year-old man comes to our clinic. He complains about a pain under a crown on 25. The clinical examination shows that the root is condemned. The patient will be treated with an extraction-implantation protocol together with a Ø4 x lg. 11.5 mm In-kone implant. The 3D radiography reveals a significant vestibular bone defect which will be compensated by the apposition of tooth-derived bone grafts harvested from the extracted root, without addition of any filling material. We are looking for ankylosis of the root grafts and the induction of new bone formation. The cone beam at 12 months after surgery allows us to assess the quality and stability of the bone regeneration obtained.



Carie sous coiffe 25 / Caries under 25

Situation initiale après dépose de la couronne / Initial situation after crown removal

coupe vestibulo-palatine de 25 avec perte osseuse vestibulaire / Vestibulo-palatal view of the bone defect on 25

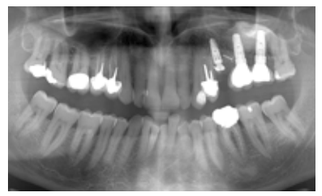
Défaut osseux vestibulaire après extraction /Bone defect after extraction

Racine vestibulaire 25 / 25 tooth root

Greffons radiculaires /Tooth-derived bone graft

Implant en place, greffons radiculaires stabilisés en position, aucun comblement /Implant in place and tooth-derived bone graft stabilized, without filling

Dépose des points à 10 jours /Suture removal at 10 days



Panoramique post-op / Radiography after surgery

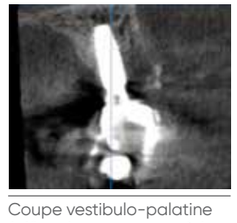
Situation à 6 mois post-op / 6 months after surgery

Dépose des vis à 6 mois, on observe la néoformation osseuse en regard / Screws removal at 6 months. Observation of new bone

Dépose des vis, greffons radiculaires parfaitement ankylosés / Removed screws and ankylosis of the grafts

Situation avant empreinte / Situation before impression taking

Coiffe définitive en place / Final crown



Coupe vestibulo-palatine à 12 mois post-op, parfaite régénération de la crête osseuse / Vestibulo-palatal view at 12 months, perfect bone regeneration

Extraction-implantation immédiate en secteur molaire et soulevé de sinus simultané

Dr. Tomasz KACZYNSKI (Pol)

Une femme de 43 ans se présente avec la première molaire maxillaire gauche endommagée. Nous optons pour l'extraction-implantation. L'examen radiologique révèle un large septum interradiculaire et 6 mm d'os disponible sous le sinus maxillaire. La dent a été extraite de manière atraumatique avec préservation du septum et de la cloison osseuse vestibulaire. L'ostéotomie a été réalisée avec expansion du septum et élévation du sinus crestal simultanément, selon le protocole d'ostéodensification avec les fraises Densah.

L'allogreffe (Biobank) a été utilisée pour l'augmentation des sinus et la greffe alvéolaire. La pose immédiate de l'implant en une étape (In Kone Universal) était envisageable en raison du couple d'insertion élevé. La couronne transvissée a été livrée après 6 mois de cicatrisation sans incident.

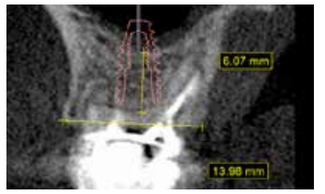
Ce cas illustre une pose d'implant immédiate réalisée avec succès et un soulèvement du sinus crestal dans la première molaire maxillaire, en utilisant une technique d'oséodensification. Ce type de traitement permet de réduire la durée de traitement plus courte et la une morbidité par rapport à l'approche par étapes et, peut être considéré une option viable dans les sites avec un os septal abondant.

Immediate molar implant placement with simultaneous crestal sinus-lift

A 43 years old female presented with non-restorable left maxillary first molar. Radiological examination revealed wide interradicular septum and 6 mm of available bone below maxillary sinus. The tooth was atraumatically extracted with preservation of septum and buccal bone plate. Osteotomy was performed with simultaneous septum expansion and crestal sinus-lift according to osseodensification protocol with Densah Burs. Allograft (Biobank) was used for sinus augmentation and socket grafting. One stage immediate implant placement (In Kone Universal) was viable due to high insertion torque. Screw-retained crown was delivered after 6 months of uneventful healing.

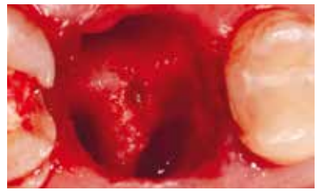
This case presents a successfully performed immediate implant placement and crestal sinus-lift in maxillary first molar with use of osseodensification technique. This treatment modality provides shorter treatment time and reduced morbidity when compared with staged approach and is viable option in sites with abundant septal bone.

Situation initiale / Initial situation



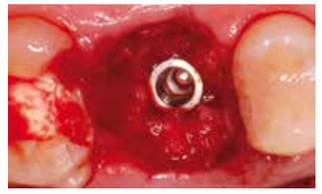
CBCT et septum interradiculaire / CBCT cross-section of interradicular septum

Septum après extraction / Septum after atraumatic tooth extraction

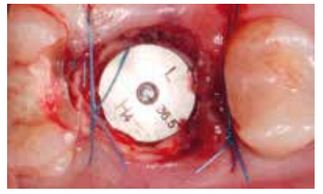


Forage pilot / Pilot drill preparation

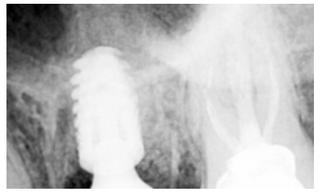
Expansion avec foret Densah / Septum expansion with Densah Burs



Mise en place immédiate de l'implant / Immediate implant placement and socket grafting



Vis de cicatrisation en place / Healing abutment placed



Radiographie post-op / Postoperative X-ray of elevated sinus

Vue à 6 mois / Surgical site after 6 months

Cicatrisation des tissus / Soft tissue healing

Vue occlusale restauration finale / Final restoration – occlusal view

Vue vestibulaire restauration finale / Final restoration – buccal view

Extraction implantation immédiate / SSA : gestion d'un cas en flux numérique

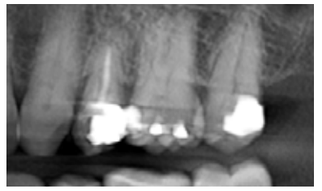
Dr J.C. GOUT (65) / Dr C. NATOLY (973)/
D. MAILLOT (prothésiste dentaire - 973)

Une patiente de 55 ans nous est adressée à la suite d'une fracture de la 24 s'étendant au niveau infra-osseux. Le contexte osseux et parodontal étant favorable nous optons pour un protocole d'extraction-implantation immédiate avec réalisation d'un pilier de cicatrisation personnalisé de type SSA (Sealing Socket Abutment). Un CBCT et une empreinte numérique pré-opératoire sont réalisés afin d'enregistrer les caractéristiques morphologiques de la dent initiale. La planification chirurgicale virtuelle permet d'évaluer les volumes osseux résiduels indispensables à la stabilisation primaire de l'implant et d'anticiper le geste chirurgical. Nous sommes en présence d'une prémolaire aux racines courtes avec un volume osseux apical important ; les corticales vestibulaires et palatines sont préservées par la fracture.
Une chirurgie atraumatique, sans décharge ni lambeau est réalisée. La pose de l'implant est optimisée grâce à un guide de chirurgie pilotée qui permet de maitriser l'axe du forage pilote qui guidera les forets suivants, jusqu'à la position finale de l'implant. Afin de majorer la reproductibilité des résultats dans ce type de protocoles, la chirurgie « Full Guided » offre la possibilité en intégrant le guidage de l'intégralité de la séquence de forage-pose, de limiter considérablement les déviations cortico-induites. Un couple de 40 Newtons est obtenu au vissage de l'implant et un comblement des alvéoles d'extraction péri-implantaires est réalisé à l'aide d'un mélange d'os autogène issu du forage et d'un substitut osseux allogénique de type BioBank. La fermeture du site à l'aide d'un pilier personnalisé de type SSA assure la stabilité du matériau de comblement ainsi que le soutien des tissus gingivaux. A la dépose du pilier SSA à 3 mois, l'implant est ostéointégré et nous constatons la préservation du profil d'émergence et des structures tissulaires. L'enregistrement des données nécessaire à la conception et à la réalisation de la prothèse d'usage se fera en 1 temps clinique selon 3 étapes successives :
1-Scan des arcades avec pilier SSA en place
2-Enregistrement de la position implantaire à l'aide d'un scan body vissé sur l'implant après dépose du pilier SSA.
3-Scan hors bouche du pilier SSA vissé sur un analogue d'implant
Cette troisième étape permet d'enregistrer le profil d'émergence sans être impacté par le collapsus des tissus mous, immédiate après la dépose du pilier de cicatrisation. Elle constitue le pendant numérique d'un transfert d'empreinte personnalisé réalisé en technique conventionnelle. Coté laboratoire, (laboratoire « Le Labo » à Toulouse) la superposition (matching) des différents scans, incluant le scan pré-opératoire initial, permet le design et la production d'une prothèse d'usage supra-implantaire dont le profil d'émergence et la morphologie globale sont en accord avec l'architecture des tissus parodontaux préservés par la réalisation d'un protocole SSA.

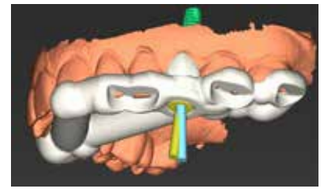
Immediate post-extraction implant / SSA digital workflow

A 55-year-old patient was referred to us following a fracture of 24 extending to the infra-osseous level. The bone and periodontal context being favorable, our choice is to proceed to an immediate extraction-implantation protocol associated with the realization of a SSA personalized healing abutment (Sealing Socket Abutment). A CBCT and a pre-operative digital impression are made to record the morphological characteristics of the initial tooth. The virtual surgical planning makes it possible to evaluate the residual bone volumes needed for the primary stabilization of the implant and to anticipate the surgical procedure. We are in the presence of a premolar with short roots and a large apical bone volume; the vestibular and palatal corticals are preserved by the fracture.
An atraumatic surgery, without discharges or flap is carried out. The placement of the implant is optimized with a pilot-guided surgery guide which allows to control the first drilling axis supposed to guide successive drillings, until the final position of the implant. In order to increase the reproducibility of the results in such a protocol, «Full Guided» surgery allows, by integrating the guidance of the entire drilling sequence, to considerably limit cortico-induced deviations. A torque of 40 Newtons is obtained when screwing the implant and a filling of the peri-implant extraction socket is carried out using a mixture of autogenous bone harvested from the drilling and an allogeneic bone substitute of the BioBank type. The closing of the site using a personalized SSA composite abutment ensures the stability of the filling material as well as the support of the gingival tissues. On removal of the SSA abutment at 3 months, the implant is osseo-integrated and we can see the preservation of the emergence profile and tissue structures. The recording of the data necessary for the design and the realization of the prosthesis of use will be done in 1 clinical time divided into 3 successive stages:
1-Scan of the arches with SSA abutment in place
2-Registration of the implant position with a Scanbody screwed onto the implant after deposit of the SSA abutment.
3-Out-of-mouth scan of the SSA abutment screwed onto an implant analog
This third step makes it possible to record the emergence profile obtained without being impacted by the collapse of the soft tissues which operates immediately after the removal of the healing abutment. It constitutes the digital counterpart of a personalized impression transfer carried out using a conventional technique. On the laboratory side, («Le Labo» laboratory in Toulouse) the matching of the various scans, including the initial pre-operative scan, allows the design and production of a prosthesis for supra-implant use whose profile of emergence and the overall morphology corresponds to the architecture of the periodontal tissues preserved by the realization of an SSA protocol.

Etat initial (fracture infra osseuse de la cuspide palatine de 24) / Initial situation



CBCT initial / Initial CBCT



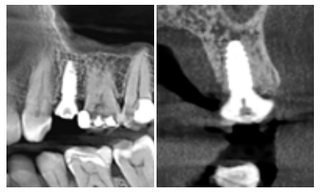
Plannification prothétique et chirurgicale / Prosthetic and surgery planning

Guide de chirurgie pilotée imprimé en resine nextdent SG / Pilot drill guide

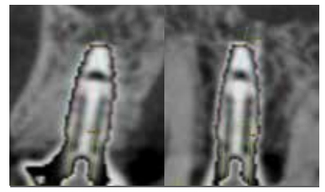
Extraction implantation immédiate avec comblement / Immediate extraction with biomaterial filling

SSA en composite réalisé au fauteil en fin de chirurgie / In-situ fabicated SSA abutment

Situation en fin d'intervention / End of surgery



Radio de controle / Control radiography



Comparaison pré-op - post-op / Pre-op an post-op comparison

Situation à 3 mois (vue occlusale) / Situation at 3 months (occlusal view)

Situation à 3 mois (vue frontale) / Situation at 3 months (frontal view)

Empreinte avec le SSA en place / SSA impresion

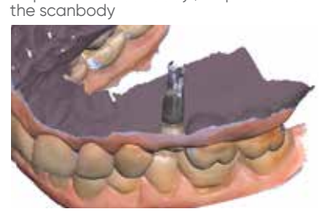
Dépose du SSA pour enregistrer la position de l'implant / Deposit of the SSA

Mise en place du scanbody / Scanbody in place

Empreinte du scanbody / Impression of the scanbody

Empreinte du SSA hors bouche / SSA separate impression

Matching des empreintes SSA / Matching of SSA impressions



Matching du SSA scané hors bouche avec l'empreinte pré-opératoire (profil d'émergence) / Matching of the pre-op and SSA impression (Emergence profile)

Couronne full zircone conforme au profil d'émergence du SSA / Full zirconia crown according to the SSA emergence profile

Mise en fonction (vue occlusale) / Loading (occlusal view)

Mise en fonction (vue frontale) / Loading (frontal view)

A lire

Crestal or 1.5 Mm subcrestal positioning of transmucosal dental implants with cemented or screwretained crowns in posterior jaws: 4-month data from a single-centre randomised controlled trial

Carlo Darausse, DDS, PHD / Marco ESPOSITO, DDS, PHD / Dabio COLOMBELLI, DDS / Pierantonio BELLINI, MD / Jacopo BUTI, DDS, PHD, Mperio RCSED / Pietro FELICE, MD, DDS, PHD

Objectives : To compare crestal versus 1.5 mm subcrestal positioning of single transmucosal dental implants and screw-retained versus cemented crowns.

Materials and methods : One hundred and sixty partially edentulous patients requiring one single implant-supported crown in the premolar/molar area were randomly allocated to four arms: crestal positioning and screw-retained crown (Group 1, 40 patients); crestal positioning and cement-retained crown (Group 2, 40 patients); 1.5 mm subcrestal positioning and screw-retained crown (Group 3, 40 patients); or 1.5 mm subcrestal positioning and cement-retained crown (Group 4, 40 patients) by a single operator. After an unloaded healing period of 3 months, definitive metal-ceramic crowns were delivered, and patients were followed up to 4 months after loading. Outcome measures were: crown and implant failures, complications, aesthetics assessed using the pink aesthetic score (PES), peri-implant marginal bone level changes and patient satisfaction, all recorded, when possible, by blinded assessors.

Results : At four months post-loading, four patients dropped out (two from Group 1 and one each from Groups 2 and 3, respectively). Two implants each failed in Groups 2 and 4, but there were no statistically significant differences between groups (P = 1.000). Complications affected four patients from Group 1, one from Group 2, two from Group 3 and six from Group 4, but between-group differences were not statistically significant (P = 0.207). The mean pink aesthetic scores were 10.30 ± 2.13 (Group 1), 10.22 ± 2.76 (Group 2), 10.47 ± 2.96 (Group 3), and 10.51 ± 2.24 (Group 4), respectively, with no statistically significant differences between groups (P = 0.9541). Likewise, there were no statistically significant differences in peri-implant marginal bone loss at 4 months after loading between groups (P = 0.9011: -0.21 mm ± 0.28 for Group 1, -0.25 mm ± 0.27 for Group 2, -0.28 mm ± 0.57 for Group 3 and -0.24 mm ± 0.26 for Group 4). Furthermore, there were no differences in patient satisfaction in terms of either function (P = 0.400) or aesthetics (P = 1.000), and all patients would undergo the same intervention again.

Conclusion: No appreciable statistical or clinical differences were found between crestal or 1.5 mm subcrestal placement of transmucosal implants in posterior jaws or between rehabilitation with screw-retained or cement-retained crowns. However, longer follow-ups are required in order to formulate reliable clinical recommendations.

Clinical Trials in Dentistry 2020;02(2):19-33
Doi: 10.36130/CTD.03.2020.03

A lire

Decision criteria proposed for the treatment of vertical bone atrophies in the posterior mandible

Pietro FELICE MD, DDS, PHD/ Roberto PISTILLI MD/ Massimo SIMION MD, DDS/ Maryia Kabaran DDS / Lorenzo BONIFAZI DDS/ Carlo BARAUSSE DDS, PHD.

In everyday practice, surgeons have to deal with bone atrophy. These rehabilitations are even more complex in the posterior mandible, and it is still unclear in the literature which fixed rehabilitation option is best. The purpose of this article was to help oral surgeons to choose the proper and updated treatment for their atrophic patients. Posterior mandible bone atrophies were divided into four main groups depending on the bone height measured above the inferior alveolar nerve: (1) ≤ 4 mm; (2) > 4 mm ≤ 5 mm; (3)> 5 mm ≤ 6 mm; (4)> 6 mm< 7 mm. Different approaches were proposed for each group, considering patient expectations. If ≤ 4 mm of bone height was available, guided bone regeneration was used as the adequate approach. For bone heights > 4 mm and ≤ 6 mm, the "sandwich" technique and/or short implant were used, depending on the esthetics. In cases with > 6mm and < 7mm above the mandibular canal, short implants might be the proper option. The authors' clinical experience and the literature were considered in order to suggest a possible correct treatment decision based on the residual bone height in the posterior mandible.

Int. J Periodontics Restorative Dent 2021;41:71-77
Doi: 10.11607/prd.4922

A lire

Immediate loading of 3 mm-diameter implants as an alternative to horizontal bone augmentation for placing 4 mm-diameter implants: one-year post-loading results from a multicentre randomised controlled trial

Marco ESPOSITO, DDS, PHD / Carlo BARAUSSE, DDS, PHD / Roberto PISTILLI, MD / Pierantonio BELLINI, MD/ Jacopo BUTI, DDS, PHD, Mperio RCSED / Pietro FELICE, MD, DDS, PHD

Purpose : To evaluate the effectiveness of immediately loaded 3 mm-diameter implants as an alternative to horizontal bone augmentation procedures to allow placement of implants with a conventional diameter of 4 mm.

Materials and methods : Forty-five partially edentulous patients with between 4 and 5 mm of bone width 3 mm below the crest in areas requiring one to three adjacent implants were randomised, according to a parallel-group design, to receive one to three 3.0 mm-diameter implants to be loaded immediately (23 patients) or horizontal crest augmentation with a granular bone substitute covered with a bone lamina for placing, after 6 months of healing, one to three 4 mm-diameter implants (22 patients) at two centres. Implants at augmented sites were left to heal unloaded for 4 months. Four mm-diameter implants were restored using provisional screw-retained reinforced acrylic prostheses, replaced after 4 months by definitive prostheses. Three mm-diameter implants were loaded immediately with definitive metal-composite prostheses if the insertion torque was ≥ 35 Ncm, or otherwise after 4 months. Patients were followed-up to 1 year post-loading. Outcome measures were: prosthesis and implant failures, any complication, peri-implant marginal bone level changes, and patient satisfaction.

Results : Two patients dropped out of the augmentation group. In three patients, five 3 mm-diameter implants could not be inserted with a torque of 35 Ncm, so they were submerged unloaded for 4 months. Two implants failed in two patients from the augmentation group (P = 0.2333; difference in proportion = -0.09; CI 95% -0.24 to 0.07) and neither patient was fitted with a prosthesis. Five patients with narrow-diameter implants were affected by six complications versus 11 augmented patients with 12 complications, the difference being statistically significant (P = 0.0477; difference in proportion = -0.28; CI 95% -0.52 to 0). One year after loading, patients with 3 mm-diameter implants lost on average 0.14 mm of peri-implant bone, while augmentation patients lost 0.52 mm. The difference in bone loss between the two groups was statistically significant (mean difference = 0.38 mm, 95% CI 0.10 to 0.66, P = 0.0112). Five 3-mm group patients versus two augmentation group patients (mean difference = 0.12 mm, 95% CI -0.12 to 0.32, P = 0.4205) and one 3-mm group patient versus two augmentation group patients (mean difference = -0.06 mm, 95% CI -0.23 to 0.12, P = 0.5900) were partially satisfied with function and aesthetics, respectively, all remaining patients being fully satisfied. All patients would undergo the same procedure again.

Conclusions : One year after loading, patients treated with 3 mm-diameter implants exhibited better results than those receiving horizontal augmentation for placement of 4 mm-diameter implants. Three mm-diameter implants might therefore be the preferable choice with respect to horizontal bone augmentation, the treatment being less invasive,

faster, cheaper, and associated with less morbidity and peri-implant marginal bone loss; however, 5- to 10-year post-loading data will be necessary before reliable recommendations can be made.

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A lire

The influence of keratinized tissue on short dental implants: a parallel cohort retrospective study on 217 implants with mean follow6up of 4.1 Years

Pietro FELICE MD, DDS, PHD / Luigi CANULLO DDS, PHD / Lorenzo BONIFAZI DDS / Roberto PISTILLI MD /Agnese FERRI DDS / Roberta GASPARRO DDS, PHD /Carlo BARAUSSE DDS, PHD

Background : Keratinised tissue height (KTh) around implant rehabilitations could be relevant to have better long-term results. This correlation, if present, could be even more important on short implants.

Purpose : To assess whether the presence/absence of KTh may have an influence on marginal bone levels, complications and implant survival on short implants.

Materials and Methods : The study was designed as a parallel cohort retrospective research. Short implants with an implant length < 7 mm were considered. One cohort was composed by patients with short implants surrounded by ≥ 2 mm of KTh; other cohort included implants with < 2 mm of KTh. Outcome measures were: marginal bone level changes (MBL), failures and complications. Results: One hundred and ten patients treated with 217 short and ultrashort implants (4 to 6.6 mm long) were retrospectively included. The mean follow-up was 4.1 years after prosthetic loading (range: 1 to 8 years). The differences between groups in MBL were not statistically significant at every follow-up considered: 0.05 mm at 1 year (P = 0.48), 0.06 mm at 3 years (P = 0.34), 0.04 mm at 5 years (P = 0.64) and 0.03 at 8 years (P = 0.82). A total of 9 complications were reported, 3 in the Narrow KTh group and 6 in the Wide one, the difference being not statistically significant (OR 4 3.03, IC 95% 0.68 - 13.46, P = 0.14). Five implants failed due to peri-implantitis, 2 in the Narrow KTh group and 3 in the Wide, without a statistically significant difference (OR 2.76, IC 95% 0.42 - 17.99, P = 0.29).

Conclusions : The present study showed no statistically significant differences in MBL, complication and implant failure rates between short implants with adequate or inadequate KThs. However, given the importance of patient comfort while brushing and plaque accumulation, KT grafts could be important in selected patients, especially for those severely atrophic, also taken into consideration all the limitations of this study and the medium-term follow-up. Nevertheless, longer follow-ups, larger number of patients and RCTs are needed before making more reliable clinical recommendations.

A lire

Posterior jaws rehabilitation with < 7mm short implants. A review

Giuseppe LIZIO / Gerardo PELLEGRINO / Pietro FELICE
Unit of Oral Surgery, Department of Biomedical and Neuromotor Sciences (DIBINEM), University of Bologna, Italy

Introduction : The results with shorter and shorter implants have been revolutionizing the implantology scenario and are worthy of being well-analyzed and understood. This review aims to add further knowledge about the last 10-years observation period on < 7mm-short implants in the posterior atrophic jaws, better defining the indication of their use.

Methods : From a Medline database research, systematic reviews, controlled and no-controlled trials (CT, n-CT) with ≥ 3years-follow-ups on <7 mm / ≥ 5mm-short implants (group A), and clinical studies with ≥ 1yearfollow-up on 4mm-short implants (group B) were considered. The outcomes, in terms of implant survival rate (SR), marginal bone loss (MBL), and complications were analyzed according to the duration of follow-ups, implant site (maxilla and mandible), type of prosthesis (single crown or splinted units), vertically impaired or normal sites.

Results : Thirty-four trials (28 for group A and six for group B) were selected. Group A: a mean follow up of 5,8 (3- 10) years came out; pre-and post-loading SR range was 94.4- 100% and 89.6-100%, respectively; the range of MBL was 0.12-1.49; 50% of CT found less statistically significant surgical complications in comparison with standard implants (ST) in reconstructed sites, while major prosthetic problems were recorded with short - implants (SH) in 37.5% of CT; in no atrophied sites, a mean SR range of 86.7-100 % vs. 88-100 % and a total bone loss of 2 vs.1.6 for SH vs.ST emerged. Group B: the overall mean follow-up period was 2,3 years, and the pre-and post- SR ranges were 93-100 % and 87.5-100 %, respectively. The MBL range was 0.02- 0.63 mm. All RCT reported significantly fewer surgical complications with SH than with ST in reconstructed mandibles within one year. No prosthetic complications were reported for up to 5 years using no pontics or cantilevers fixed bridges.

Conclusions : Similar or even better results for SH than ST in terms of post-loading SR and MBL came out for < 7mm/ ≥ 5mm-short implants in atrophic bone regardless of the prosthetic solutions, with less surgical complications but a few more prosthetic problems; the good results up to 5 years for 4mm-short implants in mandibles are associated with splinted and no-risk prosthetic solutions.

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A lire

Influence of different implant types on the bone level after healing and peri-implant tissue reactions following peri-implantitis: a preclinical study

Pietro FELICE, MD, DDS, PHD / Caroline BOLLE, DDS, PHD / Eric SCHNECK, DDS / Didier FAU, DVM, PHD / Guillaume NOEL, DVM / Marie-Paul GUSTIN, DDS, PHD / Brigitte GROSGOGEAT DDS, PHD

The study evaluated the influence of different implant types on (1) radiographic marginal bone levels after healing and (2) radiographic and histomorphometric tissue levels and characteristics following ligature-induces peri-implantitis. Four implant types (Standard Plus, Straumann [S], NobelReplace Tapered [N], In-Kone Universal, Global D [I]; and twinkon, Global D [T] were randomly placed on the edentulous healed mandibular ridge of six dogs (T0), for a total of 57 implants placed. After 10 weeks, a peri-implantitis was ligature-induced (T1). After 12 weeks, biopsy samples were processed for histomorphometric analysis (T2). Standardized radiographs were taken at T0, T1 and T2 for imaging analysis. Statistical analysis was performed using mixed-effects linear modeling. After healing (T1), the radiographic marginal bone level was more coronal for implants I, T and S compared to N, and for implants I and T compared to S. Also, at T2, the radiographic marginal bone level was more coronal at implants I, T and S compared to N. Implant type may influence bone remodeling during the early stages of experimental peri-implantitis.

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A lire

Are <7-mm long implant in native bone as effective as longer implant in augmented bone for the rehabilitation of posterior atrophic jaws? A systemic review and meta analysis

Giovanna Iezzi DDS, PhD | Vittoria Perrotti DDS, PhD | Pietro Felice MD, DDS, PhD | Carlo Barausse DDS, PhD | Adriano Piattelli MD, DDS, DrHC, DrHC| Massimo Del Fabbro MSc, PhD

Purpose : To compare clinical and radiographic outcomes of <7 mm short (SH) implants inserted in native bone vs longer (ST) implants placed in vertically augmented partially edentulous posterior jaws. A further aim was to evaluate if the residual bone dimension plays a role in the outcomes of SH and extra-SH implants.

Materials and Methods : This review was registered with PROSPERO. An electronic literature search was performed on PubMed, Scopus and Web of Science. Randomized controlled trials (RCTs) with at least 1-year follow-up, comparing fixed prostheses supported by SH vs ST implants in augmented sites were included. Marginal bone level (MBL) changes, implant survival rate, and complications were evaluated through a meta-analysis. Subgroup analysis was performed dividing the SH implants according to length at each follow-up (1-, 3-, 5-year of function).

Results : Twenty-five articles fulfilled the inclusion criteria, featuring a total of 650 SH implants placed in 415 patients and 685 ST implants placed in 403 patients. There was a trend for a significantly lower MBL associated with SH implants respect to ST implants at each follow-up, whilst there was no evidence of a difference in failure rates between SH and ST implants, for any SH length considered and at any follow-up. There was evidence for a lower incidence of complications in favor of SH

implants at both 1-year (P < .0001) and 3-year follow-up (P = .01), while at 5-year follow-up there was no evidence of a difference between SH and ST groups (P = .30).

Conclusion : SH implants supporting partial fixed rehabilitations represent a valuable alternative to augmentation procedures in the medium term. While the performance of implants at least 5-mm long is well documented, more studies with at least 5-year follow-up are needed to confirm the promising outcomes observed with <5 mm-long fixtures.

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A lire

A 5-year radomized controlled clinical trial comparing 4mm ultra-short to longer implants placed in regenarated bone in the posterior atrophic jaw

Carlo Barausse DDS, PhD1 | Roberto Pistilli MD | Luigi Canullo DDS, PhD | Lorenzo Bonifazi DDS | Agnese Ferri DDS | Pietro Felice MD, DDS, PhD

Background : Short implants (up to 5-mm long) have shown good results when compared to longer implants placed in augmented bone. Purpose: To evaluate if 4-mm ultrashort implants could also be an alternative to bone augmentation in the severely atrophic posterior jaws. The primary aim of the study was to compare implant survival rates between study groups.

Materials and Methods : Eighty partially edentulous patients with posterior atrophic jaws (5–6 mm of bone above the mandibular canal and 4–5 mm below the maxillary sinus) were included: 40 patients in the maxilla and 40 in mandible. The patients were randomized to receive one to three 4-mm ultrashort implants or one to three implants at least 10-mm long in augmented bone. Results are reported 5 years after loading with the following outcome measures: implant and prosthetic failures, complications and peri-implant marginal bone level changes.

Results : Thirty-two complications were reported for the control group in 18 patients versus 13 complications in 10 patients in the test group, the difference being not statistically significant (p = 0.103). In the augmented group, 12 implants failed in 6 patients versus 7 short implants in 6 cases, and 9 prostheses failed in the control group while 4 in the test one, without statistically significant differences (p = 1.000 and 0.363, respectively). At 5 years after loading, short implants lost on average 0.58 ± 0.40 mm of peri-implant marginal bone and long implants 0.99 ± 0.58 mm, the difference was statistically significant (p = 0.006).

Conclusion : Four-millimeter ultrashort implants showed similar if not better results when compared to longer implants placed in augmented jaws 5 years after loading. For this reason, their use could be in specific cases preferable to bone augmentation since the treatment is less invasive, faster, cheaper and associated with less morbidity. However, longer follow-ups and larger trials are needed.

Notes

DOMAINES D'ACTIVITÉS

Implantologie
Chirurgie orale
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Chirurgie traumatologique de la face
Chirurgie carcinologique
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Cranio-chirurgie
Orthodontie
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GlobalD

ZI de Sacuny
118 avenue Marcel Mérieux
69530 Brignais
France

tél. +33 (0)4 78 56 97 00
fax +33 (0)4 78 56 01 63

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