Guided Bone Regeneration with a Chin Block Autograft

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Abstract

Bone autografts are the gold standard to what bone regeneration refers to in oral implantology. There is no other type of graft that has all the regenerative capacities that the bone of the individual. In this work we summarize the technique and demonstrate it with a case in this regard.

Keywords: Bone Regeneration; Chin Graft; Dental Implants; Bone Autografts

Introduction

Accruement, deficiency the native bone is no longer an absolute contraindication for the placement of dental implants and Maxilofacial osseointegrated, since there are different techniques for the increase of bone volume.

When the defect is large, the expansion of cortical tables and placement of particle bone grafts are not sufficient to regenerate the lost tissue, having to use the techniques of bone-in-block grafting [1].

Autologous bone grafts are the only source of osteogenic cells we have for a regeneration; by what so, son the Gold standard treatment [2].

Studies such as Levin and collaborators in 2007 reported a survival rate of 96.9% for implants placed on auto Bone Block grafts Logo for a period of Tracking up to 67 months [3].

Is fundamental place the implants after the 4 months of the graft and do not allow more time because the bone gained begins to reabsorb [4].

Donor zones

En human anatomy can be extraoral areas (dome, Iliaca crest, tibia and rib), which are not always recommended for their morbidity, Ries Partners and the need to Hospitalization as well as by a means Tiva reabsorción in the receiving zone.

Las intraoral areas are the most frequently used and are in the mandibular ramus/maxillary tuberosity/ci bone gomático and mandibular symphysis [5]. Because that have lower associated risk, better postoperative. And can performed in a surgical block of a dental clinic, intra-oral donor zones are the most commonly used [6].

Surgical technique

- A Infiltrating Nestesia in receiving area and donor zone (2% Lidocaine, epinephrine 1:80,000).
- It should be noted that it makes it considerably easier to count on the block of our clinical with a doctor anaesthetist and generate in the patient monitored a neuroleptoanalgesia IA or local anesthesia enhanced with benzodiazepines short half-life.

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- Crestal and liberating incisions in the receiving area, incisions vertical or horizontal in the giver zone, depending on the size of the graft to be extracted.
- Total thickness flaps, mucoperiosteal.
- Through Trefinas of different measures, using troncocónicas strawberries with abundant irrigation or with piezoelectric instruments, the bone blocks are extracted by dislocation [7].
- The blocks obtained to adapt them to the shape of the defect are remodeled, they are perforated to allow the passage of the fixing screws freely.
- It proceeds to the decorticalization of the receiving zone with round strawberries to reach the bone marrow and get more irrigation to nourish the graft.
- The block is fixed to the receiving area with screws and/o Titanium miniplates, small defects are covered with bovine particulate bone or taken from the patient itself with bone scrapers and it all closes with a resorbable collagen membrane.
- The flap of the receiving area is released, affecting the periosteum to elongate the soft tissues and suture to separate single points.
- In the giver zone, if the flap is vertical it is not necessary to suture with thread resorbable as the direction of the muscular fibers was followed to the influence; if the incision was Ra Horizontally, the muscle is closes with Vicryl® and the mucosa with silk [8].

Postoperative indications

- Amoxicillin 875 MG VO every 8 hours x Ten days.
- Ketoprofen 100 MG VO every 8 hours x 3 days.
- Dexamethasone 8 Mg VO every 24 hours x 3 Day S
- Rinse with chlorhexidine 0.12% twice a day for 2 weeks.
- Application of ice the first two days and heat the third and fourth day after the intervention.
- Soft diet for 48 hours.
- Rest Relative For 48 hours [9].

Clinical Case

Female patient of 49 years of age who attends our clinic for aesthetic problems in the anterior area of the upper maxilla.

Figure 1

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Clinically, part 21 Crown is observed (incisor Central Upper left) in bad condition and part 22 (lateral incisor Upper left) migrated to occlusal and with great mobility.

Figure 2

Radiographic studies are Sentorthopantomography where it is observed The great bone loss at that level and confirmed a root fracture of part 22.

Figure 3

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As a routine we make models of the plaster arcades and mount them in a semi-adjustable articulator to study the occlusion general of the patient.

![Figure 4](image)

*Figure 4*

We make the extraction as atraumatic as possible of element 22 and remove the crown in part 21 which presents a metal bolt in good condition.

![Figure 5](image)

*Figure 5*

Part 22 with complete fracture of its root, probably because of a metal bolt and crown in bad condition.

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Figure 6

Radiography Defect Periapical Bone.

Figure 7

Mucoperiosteal Total thickness flap In the receiving zone.

Figure 8

Vertical incision in the giver zone.

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Figure 9

Set of Trefinas with different lengths and diameters, depending on the size of the graft we need.

Figure 10

Graft marked with trephine of 10 mm wide and deepened 11 mm.
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Figure 11

Obtaining the piece fracturándola with a chisel double bevel and hammer Surgical.

Figure 12

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Kit for bone grafts consisting of screwdriver handle, tips, drill bits and screws of different diameters and lengths.

**Figure 13**

Graft fixed and immobilized in the receiving zone with 13 mm screw length.

**Figure 14**

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Filling of dead areas with bovine particulate bone.
The periosteum of the flap is already incised Previously And the resorbable membrane was presented in the upper zone.

Figure 15

Closure of all graft with resorbable collagen membrane.

Figure 16

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Flap closure to separate points.

Control 7 days after surgery. Provisional crowns were placed in part 21 and flown in area of element 22 (Graft zone).

In 4 months the receiving zone will be re-intervened, it will withdraw the Screw, that being titanium untreated, it is not integrated into the bone tissue Native, and a conical implant of 4 x 11,5, will be placed.

Discussion and Conclusion

Mandibular symphysis block bone graft is a simple, safe and predictable surgical technique. The technique with trefinas or piezoelectric surgery reduces surgical times, post-operative pain, as well as signs and symptoms of inflammation. The closure of the receiving zone without tension reduces the complications postoperative and prevents graft exposure, which would cause resorption.

Bibliography


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