



Open Dental
Community

Clinical case overview

Honoured Member of the Open Dental Community

Dr. Joaquin Garcia Rodriguez

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This clinical case was realized in the Open Dental Community International Congress in Marbella in September, 2014. The patient Sergey Lubashenko aged 30 had an edentulous upper jaw since he was 10 years old. Lower jaw contained only three teeth: 33, 34 and 35. Severe bone atrophy with centripetal resorption of the premaxilla, very pneumatized sinuses class 4.

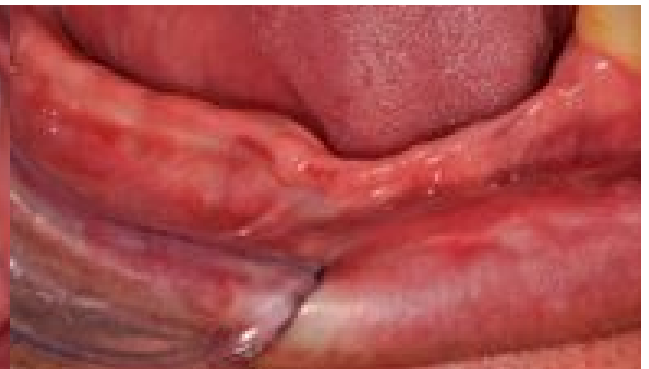
Treatment plan.

1. Upper jaw. Infiltrative anesthesia with articaine 1/100000 buccally and lidocaine 1/40,000. Inserting compressive single-phase implants Rootts using Esbipro atraumatic technique without surgical opening with compression in the area of premaxila. Bicortical anchoring fixation. Bilateral sinus lift, sinus membrane elevation, bone filling and PLASMA. Anrostomy is closed by collagen membrane. Implants in buttress, canine, medial and pterygoids areas.

2. Lower Jaw. Infiltrative anesthesia of the crest reinforced by lingual anesthesia with articaine 1/1000.000. Elevation of mucoperiosteal flap in the mandibular foramens. Atrophic jaw ridge expansion with a bucco-lingual width of 1 mm. Dr. Joaquin García Rodriguez used threaded bone expanders utilizing ESBIPO technique. ROOTT one-phase compressive implants insertion for immediate loading. Regional (truncal) anesthesia to extract teeth 33, 34, 35 and insert basal one-piece ROOTT implants into extraction sockets. Gap filling with biomaterials. Monofilament suturing, 4/0.



Photo of atrophic upper jaw in completely edentulous patient. Note the intermaxillary relationship between both jaws, severe vertical defect and unfavourable intermaxillary relationship.



View of the lower jaw with only three teeth: 33, 34, 35. Atrophic jaw ridge, with bone width of 2 mm in the symphyseal region. Absence of keratinized gums, thin epithelial biotype and presence of frenulum.



Initial digital panorama, low height between bone ridge, sinus and nasal bone in the upper jaw. Limitation between bone crest, alveolar nerve and mandibular loop.



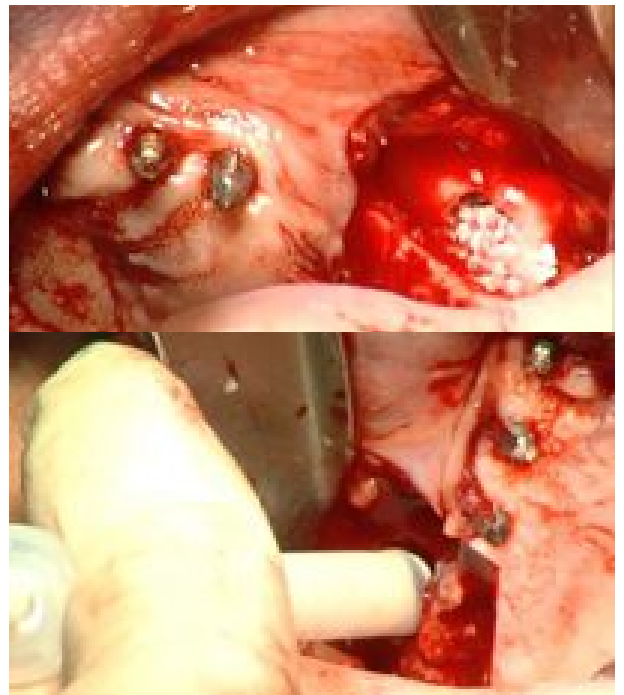
3D bio-replicas of the upper jaw. It's a real breakthrough in pre-surgical planification. It provides us with complete information on bone structures before the surgical opening. Besides it allows us to elaborate accurate surgical guides and fabricate a provisional prosthesis before surgical intervention. In the premaxila we can observe severe bone resorption of no more than 1.5 mm of bucco-lingual width, bilateral transparencies of both sinuses due to absence of the bone.



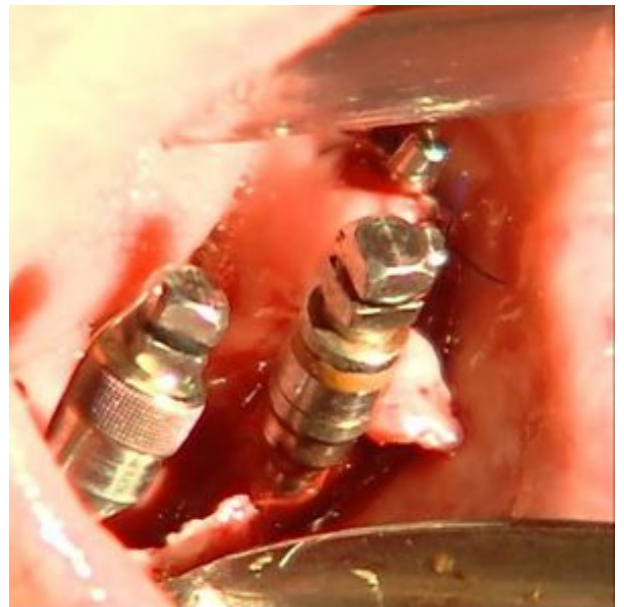
Lower jaw bioreplicas for planification of operative approach. We can discover the path of the alveolar nerve and mandibular loop to ensure the absence of surprises or complications while inserting implants and check the need to perform more complex lateralization techniques. We can match the bioreplicas and make sure that the bucco-lingual width is 1 mm, which forces us to use more complex techniques of bone condensation, expansion and regeneration.



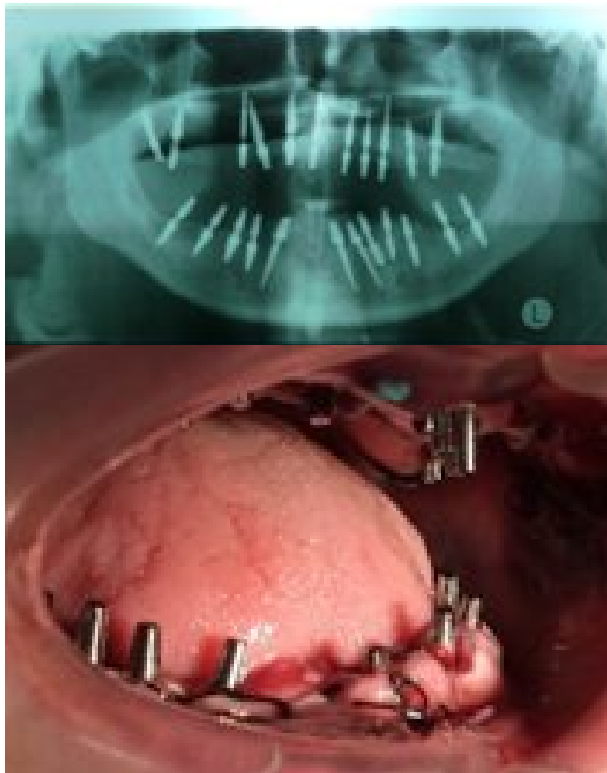
Insertion of ROOTT single phase compressive implants of atraumatic form without mucoperiosteal flap detachment, made with lance-shaped drill and atraumatic bone expanders by Dr. Joaquin Garcia Rodriguez using the bone condensation technique Esbipro.



Pic. 9 and 10. Bilateral sinus lift, antrostomy performed using SLK technique with the anterior wall of the maxillary sinus treated with titanium nitride. Membrane elevation filled with Mp3 osteogenic signature, a compound of cortical bone, cancellous bone and collagen. Plasma base is rich in growth factors. Antrostomy is then closed with the membrane.



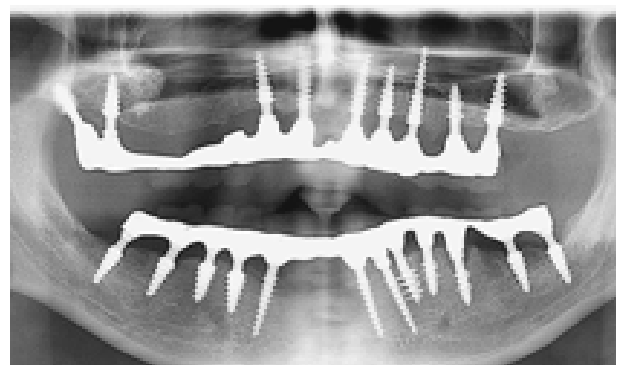
Premaxillar expansion in the lower jaw bone, as evidenced by the photo the width was 1 mm, which is incompatible with the insertion of a standard implant without using advanced techniques. In this case bone expansion was carried out by applying the Esbipro technique using threaded expanders.



Panoramic control of implant insertion into both jaws. There are 11 implants in the upper jaw. The anchoring is bi or tricortical, in the nasal spine and the buttresses, which are bone reinforcing bars. There are 12 one-phase implants ROOTT inserted in the lower jaw, 9 compressive and 3 basal post-extraction.



Hybrid porcelain-metal structure.



Radiological control in 1 year.



Taking facebow records and wax mounting of the prosthesis in the articulator.



Hybrid porcelain-metal restoration.



The patient before surgery and after restoration.



The patient Sergey and his implantologist Dr Joaquín García Rodríguez.

Conclusions.

The application and development of 3D studies allows us to make very accurate planification and predict operative period, to elaborate accurate surgical guides, which guarantees that implant is inserted into a bone. We may also fabricate a provisional prosthesis with adaptive adjustment to implants before surgical intervention. The 3D bioreplicas are the accurate copies of the ones installed, because we possess all the data on the patient's jaw, bone width and height, its density or quality, because we can see the porosity and the relation with risk structures like alveolar or mandibular nerve.

One-phase ROOTT implants are the ideal clinical advance associated with aforementioned clinical implant insertion methods, it allows us to simplify the process avoiding complicated surgical procedures, improving prognostification, minimizing complications and allowing the patient to leave our clinic with a loaded prosthesis immediately, without limitations.

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