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ZYGOMATIC IMPLANT TREATMENT: A NEW MINIMALLY INVASIVE TECHNIQUE WITH PIEZOELECTRIC INSTRUMENTATION

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Background: The zygomatic implants represent a valid alternative to regenerative surgery of severe maxillary atrophies. With a right clinical indication and a correct training for the operator it is possible to treat complex cases with immediate loading to reduce the patient's discomfort. Actually the classic technique with burs and intra-sinusal approach is very destructive way. The minimally invasive technique developed by author with ESACROM, Imola, Italy, using piezoelectric dedicated inserts, helps the surgeon to realize an easy surgery, less demolishing, more predictable because the osteotomy preparation is always outside the sinus, totally with use of piezoelectric instrumentation.

Aim & Introduction: The zygomatic implants increase quality of life and can be considered as the treatment of choice for the totally edentulous patient suffering of atrophic jaws. Usually, the zygomatic implant site preparation is still performed with long drills difficult to control. In addition, the classic intrasinus approach involves the maxillary sinus, increasing the morbidity, the operating times, and other complications difficult to resolve. The aim of this work is to evaluate a new minimally invasive technique using piezoelectric dedicated inserts and extra-sinusal approach.

Material & Methods: A total of 62 conventional implants were placed together with 53 zygomatic implants. The patients, 17 male and 9 female, no smokers, in good health, with a removable prosthesis, were followed up 24 months. After CT cone beam and software planning design, each surgery was performed placing for each patient two or four straight implants in the frontal area and two zygomatic implants in the zygomatic bone. Some cases have been treated with 4 zygomatic implants. Only one surgery was performed placing an oncology zygomatic implant. After planning the surgery a stereolithographic model was created for each patient. The insertion torque was over 35 Nc. The surgeries were performed under general anesthesia.

Results: No zygomatic implant was lost during the observation period. The survival rate for the zygomatic implants was 100% over an average of 24 months observation period. Two conventional implants were lost and there were no significant complications.

Discussion: The zygomatic implants are a valid alternative to grafting procedure for the rehabilitation of the atrophic maxilla, in many cases using an immediate function protocols. The zygomatic implants were placed outside the sinus and anchored in the maxillary alveolar process and in the zygomatic cortical bone.

Conclusion: Extrasinusal approach: no sinus complication. Piezoelectric instrumentation (ESACROM, Imola, Italy)

Dedicated inserts

No instruments vibration

No dangerous

The surgery follows 3 steps: more accuracy

Greater visibility

Less time

Less post-operative discomfort.

Biography

Tedesco Andrea Graduated in "Dentistry and Prosthodontic" at the University of Florence, Italy. He specialized in "Oral Surgery" at the Oral and Maxillofacial Department of the Traumatologic Orthopaedic Center Hospital of Florence. Post-graduate at the Oral and Maxillofacial Department of the Guy's and St. Thomas Hospital, London, UK. He is enrolled in the General Dental Council of London Member of the European Association for Osseointegration. Fellow Membership, Royal Society of Medicine, London, UK. Honorary Member of Oral Surgery Academy, London UK. He devised a new Zygomatic Minimally Invasive Technique associated with Piezoelectric Surgery. Winner for best Oral Presentation: "The treatment of atrophic maxilla using zygomatic implants" Advances in Maxillofacial Implantology", The Royal Society of Medicine, London, UK. Fellow Research Oral Surgery Department - Pisa University - Dir. Prof. M. Gabriele. Currently he published his first book entitled "Gli impianti zygomatici: attualita' nelle riabilitazioni implanto-protetiche dei mascellari atrofici" by Quintessenza Editor. Mr Tedesco is a specialist Oral Surgeon and is an expert in Zygomatic Implant Dentistry and has recently published a book on this topic "Gli impianti zygomatici: attualita' nelle riabilitazioni implanto-protetiche dei mascellari atrofici". He's recently devised a new minimally invasive technique for the use of zygomatic implants associated with Piezoelectric Surgery.

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