

Dentistry Congress 2019: Total approach concept for atrophic maxilla treatment: Nasal, pterygoid and zygomatic implants using a minimally invasive technique with piezoelectric instrumentation - Andrea Tedesco - University of Pisa

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Objectives: The nasal, zygomatic and pterygoid 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. 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 using the piezoelectric instrumentation. 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.

Aim: The aim of this work is to evaluate a new minimally invasive technique using piezoelectric dedicated inserts and extra sinusal approach.

Methods: A total of 64 conventional implants were placed together with 55 zygomatic implants. The patients, 17 male and 10 female, no smokers, in good health, with a removable prosthesis, were followed up 24 months. After Tc 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 four zygomatic implants, and other with nasal implants. Only one surgery was performed placing 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 implants were 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.

Conclusion: The zygomatic implants are a valid alternative to grafting procedure for the rehabilitation of the atrophic maxilla, in many cases using a immediate function protocols. The zygomatic implants were placed outside the sinus and anchored in the maxillary alveolar process and in the zygomatic cortical bone. There are many advantages about this new technique: Extrasinusal approach: No sinus complications; 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.