

## Dental Implant Surgery

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### A. Findings

A 73 years old male patient came to our observation in order to restore the maxilla upper left side. He has an history of periodontitis and he has become a non-smoker patient from 5 years. The pre-operative OPT shows some hopeless teeth.



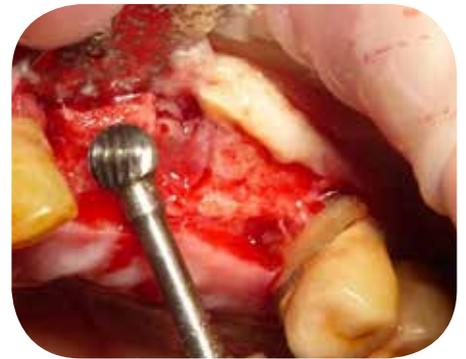
### B. Treatment plan

It was planned, according to the patient, to extract the upper left canine and insert two titanium dental implants (2.2 and 2.4). The upper left canine has been extracted (root fracture) one month before the planned implant surgery. One week before the planned implant surgery, the patient undergone to supra and sotto gingival scaling.

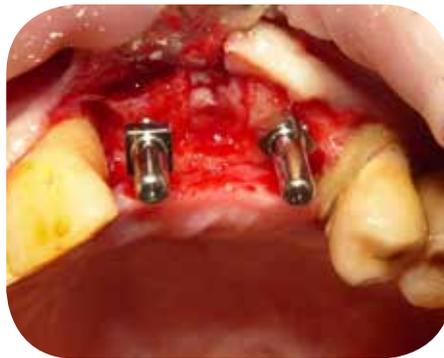


### C. Operation

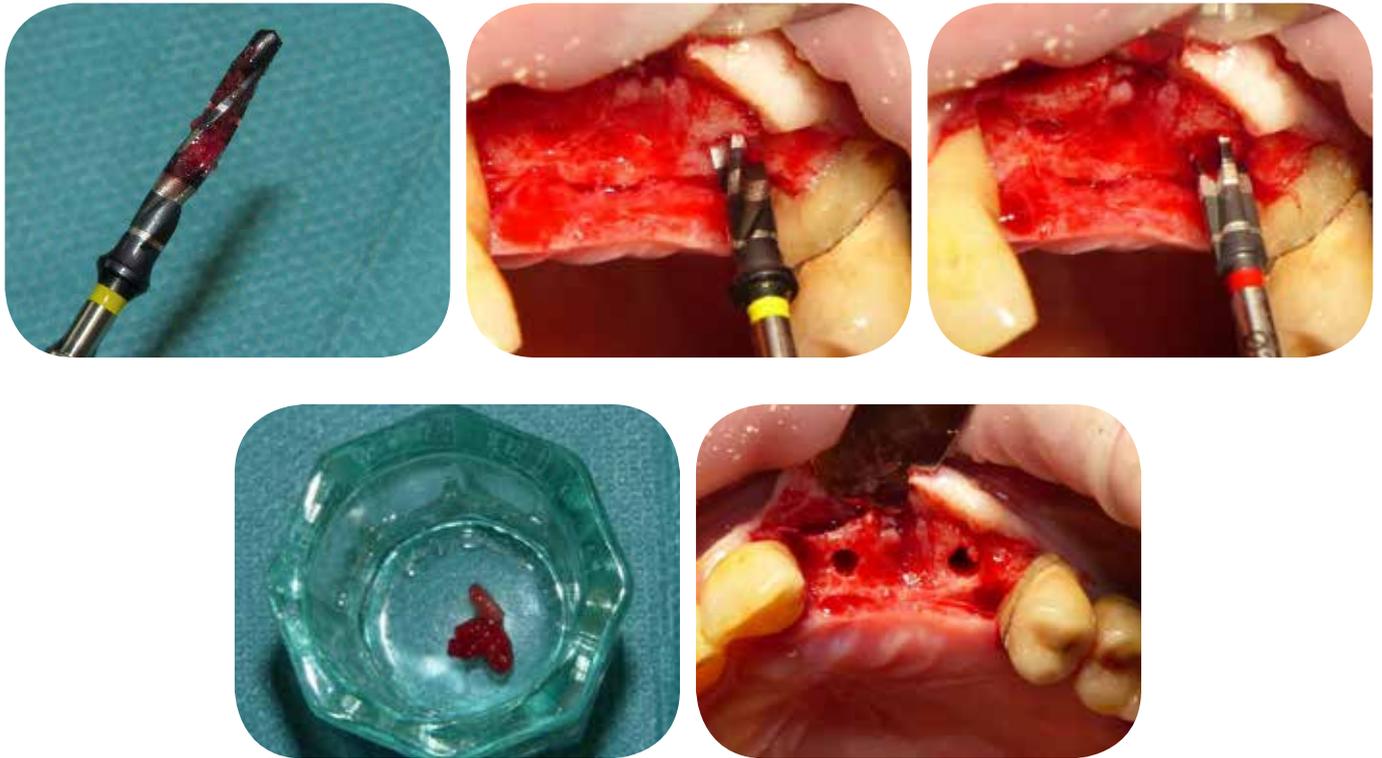
A muco-periosteal flap was elevated, the bone crest was leveled using a round carbide bur under abundant saline irrigation. The lanceolate bur was first used to drill some first mm in the cortical bone.



The 2 mm pilot drill was used to prepare the initial implant bone bed 10 mm in length for site 2.2 and 11.5 mm for site 2.4. The correct angulation of implant bone sites was checked using the parallelism pins. The burs sequence included the 2.8 mm while the 3.2 mm was used only the distal site.



The special geometry of Cortex drills allows to collect bone chips which can be used as an autologous graft.



Two Cortex© Dynamix implants, 3.3x10 mm and 3.8x11.5 mm, were finally inserted with the straight hand wrench which allows extraordinary control of the implant insertion direction. The insertion torque was medium/high testifying an excellent implant primary stability.

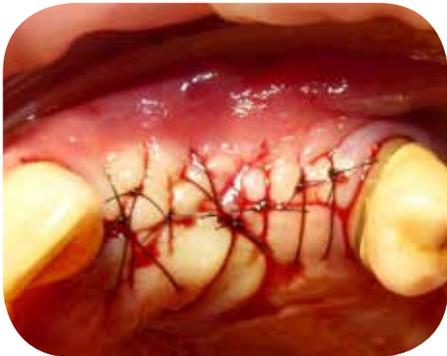


The collected bone chips were mixed with xenograft (Bio-Oss) to fill the infra-bony defect around the left central incisor.



#### **D. Clinical follow-up after operation**

The surgical wound was closed with 5-0 non adsorbable suture.  
The post-operative X-rays shows a good implant position.



## **E. Conclusion**

The Cortex© implant system used in the present case allowed an easy and successful implant surgery. The aggressive threads geometry of Dynamix implants allow to achieve high primary implant stability even in case of poor bone density (especially in the upper jaw). The surgical drills were able to collect bone chips useful to perform small bone autograft (as in the case presented). There is evidence that an internal conical dental implant connection is an efficient factor in maintaining stable bone levels around implants in function by reducing the microgap between fixture and abutment and increasing the mechanical stability of the entire connection. Cortex® implants conical connection is inspired by the platform switching concept proposed by Lazzara et al (2006), that has been extensively analyzed and validated to reduce the peri-implant bone loss related to the biological width formation.



### **Dr Marco Berardini, DDS**

Dr. Marco Berardini a leading oral surgeon practicing and actively participating in research and lectures for scientific societies of implantologists both in Italy and abroad since 2009.