Computer aided bypass of the inferior alveolar nerve (IAN) for implant placement. A case report.

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**Objectives:** This is a clinical case of a severely resorbed, in vertical dimension, mandible, treated with implants, using cone beam computed tomography (CBCT) and a dental implant planning software (SimPlant®, Materialise Dental, Leuven, Belgium).

**Methods:** 72 years old, male patient non smoker, with no medical relevant history, was planned to be treated with dental implants. Severely reduced alveolar height at the posterior mandible was clear from clinical examination, and panoramic radiograph. CBCT scan with radiographic template was taken. Data analysis was carried out using SimPlant® planning software and a surgical template based on natural template stabilant – specific drilling instrumentation, for the first drills, were produced. Three Implants (XIVE, DENTSPLY FRIADENT®, Mannheim, Germany 3.4 X 9.5 mm, 3.4 X 9.5 mm and 3.0 X 11 mm) were scheduled to be placed at positions #44, #34 and #36 respectively. Inadequate height at position #36 (7mm) and adequate crestal width at IAN's canal plane, resulted in planning implant insertion bypassing lingually the IAN. All implants were inserted under local anesthesia in full thickness flap approach. 3 months later, the patient came in, and prosthetic rehabilitation took place.

**Results:** Three implants (XIVE, DENTSPLY FRIADENT®) were placed. All planned implants were placed successfully using the surgical template. A second after implant placement CBCT revealed close proximity with IAN without any paresthesia or other postoperative complications. The patient was restored according to the prosthoendontic plan, with one screw – retained porcelain fused to metal (PFM) crown at position #46 and one cemented PFM bridge at #34 to #36 position.

**Conclusions:** Guided surgery, with the use of computer aided implant placement (CT scan and SimPlant software for data analysis), allowed to treat a patient with edentulous posterior mandible and reduced height of alveolar ridge, with implants and fixed prosthetic restorations. One implant was inserted "by passing" the IAN in lingual orientation.

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**Acknowledgments:** All radiological examinations were performed by Prof. Angelopoulos Christos, in "OPSIS" maxillofacial radiology center, Thessaliki '78, Thessaloniki, Greece

**References**