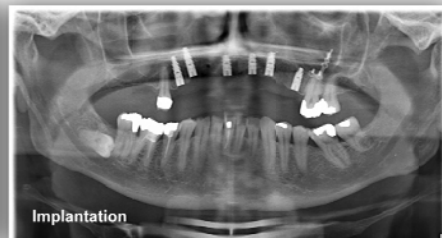
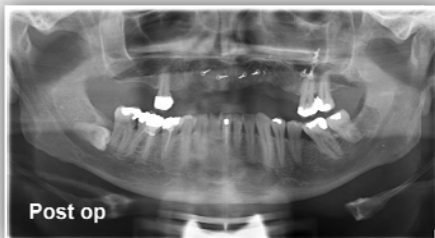
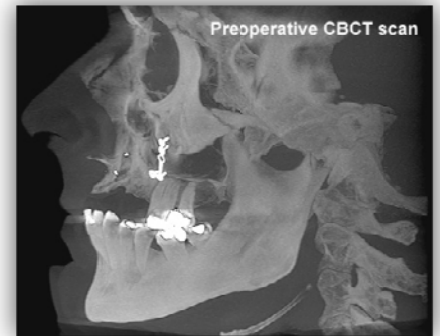


Implant supported full arch reconstruction after onlay graft in maxilla case study

Introduction: A.B. (male) 53-year-old patient came to our surgery after a serious car crash accident. He wanted to have fixed reconstruction, but due to the thin crestal bone primary implant insertion was not possible.

Methods and materials: CBCT evaluation showed massive horizontal resorption at the premaxillary region. Preoperative palatobuccal intercortical bone width was 13-28mm. Our plan was to enlarge the bone volume with onlay grafts harvested from the mandibula. After local anesthesia, the sites are exposed using classical, full-thickness flap preparation. Two autogenous bone blocks were harvested: one graft from the left retromolar region, the other block graft from left chin, near to the mental protuberantia. The blocks are used to reconstruct buccal bone wall.

For the osteotomies we used Piezosurgery unit (Mectron, I). Thin cortical grafts are stabilized at the approx. 5-7 mm distance from the recipient site with osteosynthesis screws (Meisinger, D). The space is filled with autogenous spongiosus bone mixed with Bio-Oss granules. Recipient grafted area covered by Bio-Gide collagen membrane, donor sites filled with Collagen sponge.



Results: clinical situation showed good regeneration of the grafted area so implant insertion performed 6 months postoperatively, achieving good primary stability. CBCT scan revealed 5-6 mm enlargement at the grafted area. Six Ankylos (Dentsply., D) implants were placed into 14, 13, 11, 22, 23, 25 positions. After healing period of 4 months abutments are placed and a 10 unit of porcelain bonded cross-arch-bridge were cemented on them.



Conclusion: onlay graft with thin cortical bone filled with mixed autogenous bone and alloplast materials represent a good alternative to achieve good bone volume for previously compromised implant sites.