98%

SUCCESS RATE OF IMPLANTS PLACED AFTER REGENERATION WITH AUTOGENOUS ONLAY BONE GRAFTS AND BIOMATERIALS IN ATROPHIC SITES

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OBJECTIVES

To evaluate the graft integration, implant survival and success rates related to sites reconstructed with autogenous onlay bone grafts associated with deproteinized bovine bone mineral (Bio-Oss, Geistlich Pharma AG, Wolhusen Switzerland) and resorbable collagen membranes (Bio-Gide®. Geistlich Pharma AG, Wolhusen Switzerland).

MATERIALS AND METHODS

Eighteen bone deficiencies from thirteen patients were reconstructed with autogenous bone blocks harvested from intra-oral sites. The autogenous bone was always stabilized with fixation screws, then covered with a shield of deproteinized bovine bone mineral, and with a resorbable collagen membrane. Six months afterwards, the sites were reopened, 49 implants were inserted in the reconstructed sites, and the amount of bone resorption was estimated using the fixation screws as reference points. Three months afterwards, all implants were loaded. The mean follow-up after prosthetic load was 21 months (range: 15-26 months).

Fig 1-4. Pre-operative radiographic evaluation of 4 treated cases

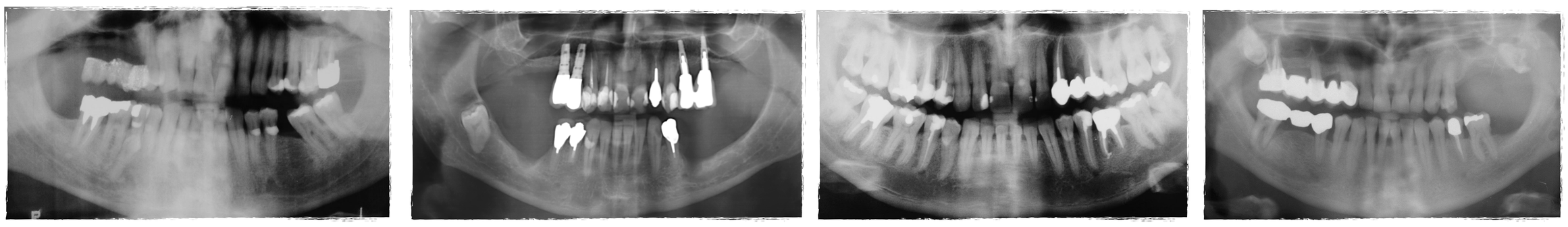


Fig 5-8. Mandibular bone bocks harvesting procedures

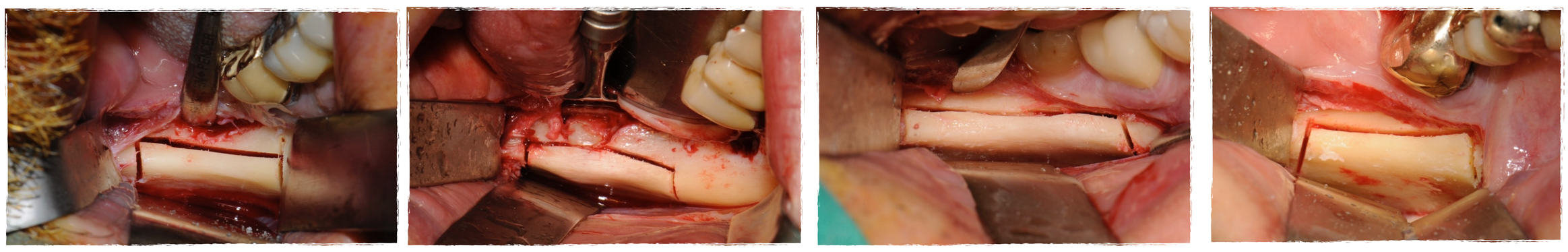
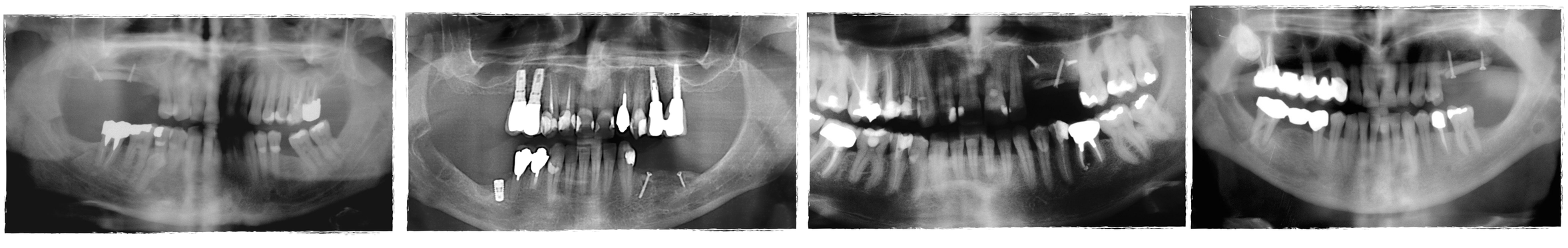


Fig 9-12. Post-operative OPT of the engrafted sites



RESULTS

All bone grafts were fully integrated and no significant bone resorption was observed at the time of implant placement. A post-operative complications rate of 5,5 % was reported at both the harvesting and grafting sites, represented by one case of transitory paresthesia and one case of membrane exposure, respectively. The overall implant survival and success rates were comparable with data reported for implants placed in native bone (100% and 98%, respectively).

CONCLUSION

Results from this study suggest that the reconstruction of resorbed edentulous sites with autogenous onlay blocks stabilized with fixation screws, mixed with bovine bone mineral, and covered by a resorbable collagen membrane, represents a reliable alternative to allow the rehabilitation of atrophic sites with adequately dimensioned implants placed in a prosthetic driven position.

References

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