COMPUTER-ASSISTED SURGERY FOR IMPLANT-PROSTHETIC REHABILITATION IN FRAGILE PATIENTS

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Aim: the aid of guided surgery in prosthetic implant rehabilitations in fragile patients, allows to reduce the operating time, to ensure a lesser invasiveness and to predict the position of the implant so as to make the prosthetic product in pre-operative phase.
Methods: 3 patients were selected with sufficient amount of bone to perform all-on-4 and all-on-6 immediate loading with implants of length[3] 8.5 mm and diameter 4 mm. Caregivers were included in an educational and preventive program to ensure patients' proper oral hygiene, appropriate nutrition, and elimination of risk factors for their oral health. In addition, instructions for the management of prosthetic restorations were provided.
Results: at 1-year follow-up, the prostheses are still stable and in place. No implant loss was observed, and patients/caregivers reported no painful episodes.
Conclusions: the prevention, treatment and rehabilitation of fragile patients through today's available technological innovation of surgical template, leads dentistry to be an inclusive medical discipline, following the UN and WHO 2030 Agenda Objectives 3 and 10 on sustainable development.

POLYNUCLEOTIDES FOR BONE REGENERATION IN HORIZONTAL ALVEOLAR DEFECTS: A CASE SERIES

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Aim: the aim of this study was to examine the use of polynucleotides mixed with hyaluronic acid (PNs-HA) in a gel form to promote bone regeneration in horizontal alveolar defects.
Methods: six adult patients underwent localized horizontal guided bone regeneration using xenogeneic bone substitute and a staged approach. The graft comprised a mixture of Deproteinized Bovine Bone Mineral (DBBM) particles and PNs-HA gel in a 3:1 ratio, respectively. The graft material was covered by a resorbable collagen membrane fixed with pins to the underlying bone. Implant placement was performed after 5 months healing period.
Results: healing proceeded uneventfully in all the cases, with the graft appearing well vascularized and firmly attached to the recipient bone upon re-entry. Histologically, the regenerated bone exhibited high mineralization and well-organized lamellae, completely embedding residual biomaterial granules. Histomorphometric evaluations revealed that newly formed bone occupied an average of 41.2%±12.4% of the analyzed samples. Linear measurements from CBCT scans indicated an overall linear horizontal bone gain of 4.91±0.88 mm.
Conclusions: based on the safety of the mixture, absence of abnormal clinical and immunological responses in the regenerated areas, and macroscopic and radiological features of the regenerated bone were noticed. The present study supports the use of PNs-HA-based gel mixed with DBBM granules as grafting material for horizontal alveolar bone regeneration.