Conclusion: Cement-associated peri-implantitis could be recovered with removal of excess cement, repeated debridement of implant surface and delivery of screw-retained prosthesis.

P1228

Treating peri-implantitis with topical oxygen therapy

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Aim: The aim of the presented case studies was to examine the effectiveness of topical oxygen therapies in a treatment regime for peri-implantis.

Material and Methods: Wound healing requires that a variety of cells increase their metabolic activity for the reparative processes such as cell proliferation, bacterial defence, angiogenesis and collagen synthesis to progress satisfactorily. This results in a high demand for oxygen. The role of oxygen in wound healing is not yet completely understood. However many observations have shown wound healing to be enhanced by increasing pO_2 levels in the tissues. By contrast severe and destructive processes have been shown to be occur under hypoxia. Peri-Implantitis and periodontitis are bacterial infections with chronic inflammation characteristics. It has been shown that the pO2 value in areas of peri-implantitis is significantly lower than in healthy tissue. Moreover, the pO2 value has been shown to correlate with pocket depth. Interestingly, the deeper the pocket, the lower the pO2 value. These lower oxygen levels can reduce the body's resistance to bacteria and hence the healing potential of the wound. Changing this chronic wound to an acute wound through curettage, together with a local application of an oral gel releasing oxygen into the wound bed, should greatly aid in the repairing process and accelerate healing.

Results: The case studies show the effectiveness of the treatment regime to reduce probing depth and increase bone height.

Conclusion: Whilst further research is required, the case studies show the potential effectviness of topical oxygen therapies in the treatment of peri-implantis.

P1229

Inferior alveolar nerve transposition using piezosurgery for dental implants

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Aim: The aim of this study is to evaluate the mental nerve function after use of piezosurgery in IAN transposition and implant placement.

Material and Methods: 7 cases, 13 sides with severely atrophic posterior mandible was included, 4 cases are edentulous and 3 with some remaining anterior teeth. Bucal cortex bone was removed with the piezoelectric device (Mectron Piezosurgery Device, Mectron, Genova, Italy) mounted with OT7, OT1 and OT5 tip. 9 lateral incisive branches were severed and 4 lateral incisive branches were preserved, the mental nerve and IAN proximal portion can be freed from the canal, then lateral corticotomy is extended posteriorly to isolate the IAN, after IAN transposition, the implants were placed, finally, the GBR were done around the implants to cover the defects using the excised bone, BIO-OSS and BIO-GIDE, then the IAN was left to lie laterally from its canal. Patients underwent subjective and objective assessment of outcome 7 days, 3 months and 6 months postoperation.

Results: Almost every lateral was temporal paresthetic or hypoesthetic at 7 days post operation, but on follow-up at 6 months, 11 sites were normal with complete recovery of the sensitivity within 6 months after the surgical procedure. 1 side still have small piece of areas of numbness or tingling, 1 patient complained disturbance of periodontal sensibility in residual anterior teeth.

Conclusion: Inferior alveolar nerve transposition is one of the therapeutic options which can be safely and predictably performed with Piezosurgery with excellent recovery of the mental nerve sensitivity, preservation of incisive branches is difficulty during IAN transiposition.

P1230

Efficiency of photodynamic therapy in the treatment of peri-implantitis. A randomized controlled clinical trial

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Aim: The aim of this study was to evaluate clinical and microbiological outcomes, prior to and following the treatment of peri-implantitis, using surgical methods with or without an adjunctive photodynamic therapy.

Material and Methods: 30 systemically healthy patients with peri-implantitis diagnosed were divided into two groups. In the experimental group (15 patients) photodynamic therapy was used for decontamination of implant surface and peri-implant tissues during the surgical procedure. Decontamination of implant surface and peri-implant tissues in the control group (15 patients), was performed with chlorhexidine gel followed by saline irrigation. Bleeding on probing (BOP), plaque index (PI), peri-implant probing depth (PPD), mucosal recesion (MR), and clinical attachment level (CAL) were recorded at baseline and at 3 months after the surgical treatment. Samples for microbiological indentification were collected before therapy, during surgical therapy and 3 month after therapies. Anaerobes' identification systems using enzymatic tests were applied for the indentification of the isolated anaerobs.

Results: The photodynamic therapy application was associated with significant decontamination of implant surfaces and peri-implant tissues with complete elimination of anaerobic bacteria when compared with chlohexidine application, immediately after surgical procedure and 3 month after. The use of photodynamic therapy resulted in significiant dicrease of BOP when compared with chlorhexidine. There was no significiant difference in PD and CAL results between two groups.

Conclusion: The results of this study indicate that the photodynamic therapy can be used as an adjuvant therapy for decontamination of implant surface and surrounding peri-implant tissues in the treatment of peri-implantits.