Removal of Orthodontic Splints (a New LightWalker Application?)

Terry Rose
Melbourne, Australia

Orthodontic composite splints and bonded RPE's (rapid palatal expanders) are used to fix anterior and posterior cross bites. When the cross bite has been corrected during orthodontic treatment, it is time to remove the bonded composite splint or RPE. Traditionally bonded composite splints are removed with high-speed/low speed diamonds and polishing disks. This is not much of a problem in the mixed dentition as the primary teeth will be followed by permanent teeth, so damage to primary teeth during removal is not as critical as removal of material from permanent teeth. Some tricks can be used in preparation of surfaces for bonded composite splints and RPE's:

Presented are two orthodontic cases: 1) an RPE, 2) a bonded composite splint, where these treatments have been used to fix cross bites and the LightWalker has been used as a debonding aid.

The same principles have been used here as are used in crown removal settings, to penetrate the materials (bonded RPE acrylic/ bonded composite) and weaken the composite tooth bonding interface.

The LightWalker can be a useful tool in aiding removal of bonded orthodontic composite splints and bonded RPE appliances. It was successfully used on these two documented cases and the same techniques have been used on other orthodontic cases in my practice.

SWEEPS Protocol in Preparing Extraction Sites for Immediate Zirconia Implant Placement

Judson Wall

The incidence of failed and failing titanium implants and root canal treated teeth is rising sharply. The connection between these oral crises and chronic degenerative conditions is coming to light. The Fotona LightWalker laser has solutions for treating both peri-implantitis and failed root canal treated teeth. Whether attempting to save failing titanium implants and root canal treated teeth, or cleaning the residue left behind after they are removed, the LightWalker offers literally life-saving options. Dr. Wall will share a case study showcasing the use of SWEEPS technology in titanium implant removal and surrounding bone sanitization, as well as ischemic bone disease treatment.

Treating Peri-implantitis by Er:YAG Laser: a Regenerative Surgical Approach

Betül Göfteci

To assess the efficacy of regenerative surgical therapy for the management of peri-implantitis using the Er:YAG laser decontamination method.

Three patients were diagnosed with peri-implantitis. The patients were suffering from advanced peri-implantitis (combined supra- and intra-bony defects) and were treated with flap surgery and granulation tissue removal. The intra-bony aspects were decontaminated using an Er:YAG laser device. A new SWEEPS (Shock Wave Enhanced Emission Photoacoustic Streaming) modality for the Er:YAG laser was used with one of the cases, especially to improve the cleaning and disinfecting efficacy of the laser-assisted surgical procedure. The intra-bony component was augmented with a bone mineral and covered with a collagen membrane. Clinical and radiographic parameters were recorded at baseline and after 3 months of non-submerged healing. Post-operative maintenance care included supramucosal plaque removal. The primary endpoint was defined as disease resolution at 6 months (i.e. absence of bleeding upon probing (BOP) and probing pocket depths (PD) ≥6 mm at peri-implantitis sites).

All cases exhibited a comparable radiographic bone fill at the intra-bony defect component. The cases were followed up at three months, 6 months, 1 year, 2 years and 5 years.

Surgical treatment of peri-implantitis using Er:YAG laser on patients with titanium implants was associated with significant clinical improvements. It could be concluded that using Er:YAG laser decontamination and regenerative procedures are among several options (including nonsurgical, chemotherapeutic, resective, or implant removal) that should be considered for dealing with peri-implantitis.