Minimally invasive root canal treatment uses fluids, acoustics

By Sonendo Staff

The GentleWave® System offers a minimally invasive alternative to standard root canal treatment, employing patented Multisonic Ultracleaning® technology to deliver fluids throughout the entire root canal system. The advanced combination of fluid dynamics and broad-spectrum acoustic technology enables the GentleWave Procedure to reach into the deepest, most complex portions of the root canal system to remove tissue, debris and bacteria.

The result is a more thorough, more effective cleaning that potentially helps reduce the need for retreatments over time. The GentleWave procedure also helps preserve the integrity and functionality of the tooth by leaving more of the dentin structure intact and can typically be completed in just one session.

For more information, you can contact Sonendo® at (844) 766-3636 or visit www.Sonendo.com.

References

‘Uni-Verse-All’ positioner holds any size sensor

With Flow Dental’s new Uni-Verse-All positioner, you could take every imaginable X-ray while using only one positioner and one aiming ring. Photo/Provided by Flow Dental

Digital X-rays are changing how you manage patient diagnostics. But while digital is faster and easier to use, it poses some unique challenges too. Sensor positioning is one such challenge. Unlike film, sensors are rigid and thick. And unlike film, there is no standard size to a “size-2” sensor. All this makes finding a quick and easy way to position your sensor somewhat more difficult than when you were using film.

With Flow Dental’s new Uni-Verse-All positioner, you could take every imaginable X-ray while using only one positioner and one aiming ring. Sounds impossible, yet Flow’s Uni-Verse-All sensor positioner does just that. It will hold just about any size sensor. The Uni-Verse-All sensor holder lets you reposition the sensor along the bite plane so you can go from a periapical to a bite wing in seconds, and without changing parts.

The Uni-Verse-All is easy to use and set up is fast. You choose from two sizes of sensor holders (both included in Flow’s starter kit). You then snap the sensor holder into the Uni-Verse-All positioner and slide on the aiming ring. Just like that you’re ready. Move the holder down for anterior or periapicals, up for bite wings. Lightweight for added patient comfort, Uni-Verse-Alls are re-useable and autoclavable. A starter kit with everything you need retails for less than $57.

For more information, or to order, you can contact your local dealer or visit www.FlowDental.com.

(Source: Flow Dental)

Anutra Medical introduces 1 percent lidocaine product

Medical device company, Anutra Medical, is now adding 1 percent lidocaine with epinephrine 1:100,000 to its product offerings, making this particular concentration of lidocaine more accessible to the dental market than ever before.

A published study that appeared in the Journal of Oral and Maxillofacial Surgery in October 2017, showed that buffered 1 percent lidocaine with epinephrine can be equally as effective as 2 percent lidocaine with epinephrine for a maxillary field block. This independent study by the University of North Carolina, Chapel Hill, found that buffering 1 percent lidocaine with epinephrine 1:100,000 with the Anutra Local Anesthetic Delivery System, “reduces the pain on injection with a maxillary field block and results in similar lengths of pulpal anesthesia tested with a cold stimulus” as compared to the traditionally used 2 percent lidocaine with epinephrine 1:100,000.

As a result of the compelling study showing the benefits of the lower concentration of lidocaine, Anutra Medical is now adding 1 percent lidocaine with epinephrine 1:100,000 as one of its regular product offerings.

In other studies conducted in April of 2017, using the Anutra Local Anesthetic Delivery System, The School of Dentistry at the University of North Carolina, Chapel Hill, found that, “Mean blood level differences of lidocaine for each patient were significantly lower after nerve block with the buffered drug compared with the nonbuffered agent.”

Anutra Medical has introduced 1 percent lidocaine 1:100,000 into the dental market in a more accessible format than it has been in the past. The option of this new concentration of lidocaine to dental practitioners shows Anutra’s dedication to improving patient experiences while transforming practice efficiency.

About Anutra Medical Inc.
Located in Research Triangle Park, N.C., Anutra Medical comprises a team of experienced dental and health-care professionals that is focused on providing solutions to enhancing the patient experience and increasing office efficiency.

The company is leveraging the science of buffering local anesthetics through an innovative and revolutionary delivery system. Its core belief is creating partnerships with practices. The company fosters these relationships by either performing in-office implementations or using technology for educating and training.

For more information or answers to any questions, you can contact Ryan Vet via email at press@anturamedical.com.

(Source: Anutra Medical)
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Ankylosed tooth extraction

Case shows versatility of all-tissue CO₂ 9.3 µm laser

By Dr. Timothy Anderson

Case summary
A 16-year-old male was referred by his orthodontist for comprehensive care and the extraction of tooth #7T. The patient’s mother was very hesitant to have sedation done with the local oral surgeon, so she inquired about the possibility of having the procedure completed in-office.

Treatment plan
The patient’s condition was diagnosed with radiographs (Fig. 1), which showed a clear tooth ankylosis (Fig. 2), loss of the periodontal ligament space and blending/fusion of the tooth to the bone.

The ankylosed tooth would need to be removed in order for the orthodontist to proceed with an orthodontic treatment plan for the patient.

Our intended surgical plan was to perform an atraumatic closed ankylosed tooth extraction as quickly and comfortably as possible without having to sedate the patient. This was to be accomplished by using my Solea CO₂ all-tissue 9.3 µm dental laser.

Technique using the Solea all-tissue CO₂ 9.3 µm laser
This procedure was performed with one carpule of 2 percent lidocaine with 1:100K epinephrine injectable anesthetic and using the Solea laser with software 3.15, using the hard- and soft-tissue selection and 100 percent mist.

My initial approach to the case was to just elevate and luxate the tooth. However, that resulted in movement on only teeth #28 and #30 due to the extent of the ankylosis.

The laser was used to trough the tooth and selectively remove bone around the ankylosed tooth (Fig. 3).

The tooth was then sectioned with Solea until access depth and water collection slowed the ablation (Fig. 4).

A surgical handpiece was then utilized to complete the section.

As shown by the images, the minimal bleeding and the lack of any need for sutures resulted in a very clean and efficient surgery. The total procedure time was less than 30 minutes (Figs. 5, 6).

Benefits of Solea
The use of the Solea CO₂ all-tissue 9.3 µm dental laser (Figs. 7, 8) aided significantly in both the psychological and surgical management of this case. The quick and smooth cutting of the laser helped to reduce both the patient’s and the parents’ anxiety when compared with a traditional surgical handpiece.

The major surgical benefit was the extreme precision and efficiency of the laser’s cutting. A large flap was not needed, and there was minimal bleeding from the incision sites. Overall, the laser resulted in a less traumatic procedure that significantly enhanced the patient experience, especially considering the nature of the procedure.

There was profound healing for the patient in fewer than three days, which enabled the patient to immediately move forward with an orthodontic treatment plan.

Fig. 1: Radiograph shows tooth ankylosis, loss of periodontal ligament space and blending/fusion of tooth to bone.
Clinical photos/Dr. Timothy Anderson

Fig. 2: Pre-op image of tooth ankylosis.

Fig. 3: Laser is used to trough the ankylosed tooth and selectively remove bone around the tooth.

Fig. 4: Tooth sectioned with Solea until access depth and water collection slow the ablation.

Fig. 5, 6: The lack of sutures and minimal bleeding results in a clean and efficient surgery. The total procedure takes less than 30 minutes.

Fig. 7: Control panel of the Solea CO₂ all-tissue 9.3 µm dental laser. This case study uses the hard- and soft-tissue selection and 100 percent mist. Product photos/Provided by Solea

Fig. 8: The Solea CO₂ all-tissue 9.3 µm dental laser unit.