Readers' forum
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RDE Restorative Dentistry & Endodontics

Introducing the GentleWave System

Q What is the GentleWave System and can this be an alternative to conventional root canal treatment?

A When treating patients for root canal treatment (RCT), we use instruments and treatment protocols to remove tissue debris, bacteria, and biofilm from the root canal system. However, the root canal system is complex. It has apical-thirds and other complex anatomical areas that cannot be easily reached conventionally. The tissue debris, bacteria, and biofilm remaining in these anatomically challenging areas are what make RCT less predictable. Also, the use of conventional treatments requires the removal of excessive dentin which is necessary for long time success. This, however, has an adverse effect on the integrity of the root and may lead to root fractures, perforations, and even extractions. The GentleWave System (Sonendo, Inc., Laguna Hills, CA, USA) was recently introduced in the US market to provide better solution to these problems and improve treatment outcomes while maintaining the integrity of the tooth. The system was designed for endodontics in contrast to other devices that were adopted from other medical fields.

1. The GentleWave System provides tissue dissolution of eight and ten times faster than ultrasonic devices and needle irrigation, respectively.[1]
2. The GentleWave System results in negative pressure and zero extrusion at the apex.[2,3]
3. To use the GentleWave System, the teeth have to be only minimally instrumented *e.g.*: size 15/04. The resulting fluid dynamics, multisonic sound waves, and sono-chemistry, enable the treatment fluids to penetrate and reach complex areas such as apical-thirds, isthmi, lateral fins, dentinal tubules, and other anastomoses.[4-6] This cleaning system composes of a portable treatment unit with a single-use sterile handpiece. Irrigant solutions of NaOCl, distilled water and EDTA are included in this cleaning system.
4. Recent clinical study shows that only 3% of the patients experience moderate post-treatment pain, and 97% of successful healing in the teeth treated with the GentleWave System at 12 months.[7]

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