Sonendo® has developed a system — called the GentleWave™ — that delivers broad-spectrum sonic energy through a disposable dental handpiece to the root canal system. This closed-loop, fluid-based Multisonic Ultracleaning System™ quickly, easily and safely loosens and removes all the pulp tissue, debris and bacteria from the entire root canal system.

The system employs advanced fluid dynamics and hydro acoustics to generate a wide spectrum of waves and deliver them via a liquid medium throughout the root canal system. Unlike ultrasonic — where only one frequency of sound is applied — the GentleWave delivers multiple, various and specific wavelengths ranging from large (e.g., tissue scale) to small (e.g., cellular scale). These waves are distributed over a broad range of frequencies and remove unhealthy pulp tissue and bacteria safely, regardless of the complexity of the canal system.

Every aspect of the GentleWave is acutely focused on addressing the major challenges that continue to exist within root canal therapy, including: cleaning of the entire canal system fully, including the isthmus, lateral canals, etc., all the way to the apex; complete removal of the smear layer created during shaping; complete removal of tenacious biofilm; and deep penetration and removal of bacteria within the dentin tubules.

In short, the Multisonic Ultracleaning System greatly optimizes the treatment fluids being used (NaOCl, EDTA). This allows for rapid tissue dissolution and bacteria removal within the entire canal system, in only a few minutes.

The GentleWave System (Fig. 1) provides an exciting option for endodontic therapy. Presenting a slender and elegant profile, the console complements and enhances the modern dental practice as a statement to the patient that the practitioner is serious about integrating cutting-edge technology into the office.

Simple steps

After rubber dam placement and tooth preparation including access, all that remains is some minimal shaping before a closed-loop system is prepared that connects the Sonendo handpiece (Fig. 2) to the tooth being cleaned. Sonendo has proprietary aids and techniques available to rebuild the tooth and create a closed-loop system. Then within minutes, simultaneous cleaning of the entire canal system is achieved.

A self-guided menu takes the clinician through the steps needed to prepare the system prior to use. During the treatment, an on-screen display (Fig. 3) illustrates the progress of the treatment.

The GentleWave system is available in limited commercial release today. The device is FDA cleared. Located in Laguna Hills, Calif., Sonendo currently employs more than 80 engineering, marketing and research professionals. For more information, contact Sonendo at info@Sonendo.com.