Tissue Dissolution by the Novel GentleWave® System and Sodium Hypochlorite

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PURPOSE

An in-vitro study was performed by Dr. Markus Haapasalo and his team, to understand the tissue dissolution ability of the GentleWave® System and how it compares to other standard endodontic devices. These results were published in the Journal of Endodontics (Vol 40; 2014).

METHODS

Pieces of bovine muscle tissue were placed in 0.7-mL test tubes and exposed to five minutes of sodium hypochlorite (NaOCI) by different endodontic devices. The devices were tested with 0.5%,

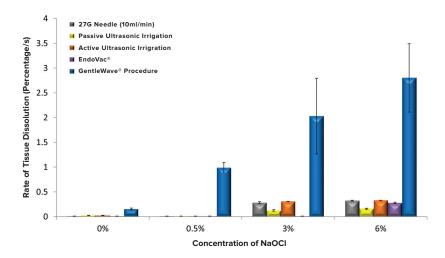


Figure 1. The rate of tissue dissolution (Percentage/s) at 40°C using the GentleWave® System and other conventional irrigation devices.

3%, and 6% NaOCI at 21°C and at 40°C. Sterile water was used as a control. The mass of tissue specimens was measured and recorded before and after the use of each device, and if the specimen was completely dissolved visually within five minutes, the dissolution time was recorded. The rate of tissue dissolution (Percentage/s) was calculated. Statistical analysis was performed.

CONCLUSIONS

The novel GentleWave System achieves seven times faster tissue dissolution rates when using 3% NaOCl as compared to other systems examined, including passive and active ultrasonic systems.

Learn more about the GentleWave® System at GentleWave.com/Doctor

