Achieving Root Canal Sterility – Fact or Folly?

Total elimination of bacteria from infected root canal systems remains the most important objective of endodontic therapy. However, in spite of a plethora of new products and techniques, achieving this objective continues to elude our profession. Historically, endodontic treatment has focused on root canal disinfection with entombment of remaining bacteria within dentinal tubules and inaccessible areas of the root canal system. Although many factors have been implicated in the etiology of endodontic failures, it has become evident that these “entombed” bacteria can play a pivotal role in the persistence of endodontic disease.

A treatment protocol encompassing several new innovations and concepts will be presented that, for the first time, allows us to consider that achieving root canal sterility may soon be within our grasp. Emphasis will be placed on **Cone Beam CT** in endodontic diagnosis; root canal **Working Width** management (with LSX or BioRaCe rotary files); **apical negative pressure** irrigation (using the EndoVac system) and intracanal **LASER therapy** (with the Waterlase MD, utilizing radial firing tips).

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