

## S3

## LightSpeed and SimpliFil : Designed for Successful Endodontics

**Steve Senia, DDS, MS, BS, FACD.**

Department of Endodontics, University of Texas Health Science Center, San Antonio.

A new root canal instrument and instrumentation technique: a preliminary report.

Cleaning and shaping the root canal system has been and continues to be a challenge for even the most experienced endodontist. Curved, narrow canals, in particular, cause difficulties for the beginner as well as the specialist. A new instrument designed to incorporate new concepts was developed to ameliorate the problems in cleaning and shaping root canal systems. This new instrument has been given the name of SW (Senia and Wildey). The new SW instrument uses controlled right and left rotational forces. This motion was used to clean and shape simulated root canals in plastic blocks and root canals in extracted teeth. Instrumentation appeared to be easier, faster, and more precise than with conventional instruments, especially in curved canals where there was remarkable reduction of canal transportation. A mechanical version of the SW instrument was also developed. It was used to flare the coronal portion of the root canal system.

Wildey WL, Senia ES., *Oral Surg Oral Med Oral Pathol* 1989 Feb;67(2):198-207

Another look at root canal instrumentation.

Several aspects of root canal instrumentation need additional research. Various factors must be considered in an analysis of instrumentation of the root canal system: the dentin that is cut; the technique used to cut it; the design of the instruments; the material and manufacturing process used to make the instruments; the irrigant used during the procedure; and the anatomic configuration of the root canal system. An analysis of these factors clearly indicates that existing root canal instruments and techniques are less than ideal and, in fact, do not accomplish what is expected of them. Root canals must be properly, but, at the same time, destructive and unnecessary removal of dentin should be kept to a minimum. The Flex-R and Canal Master instruments were developed to address some of the shortcomings of existing instruments and techniques. More scientifically based research is needed to fully evaluate these new instruments and techniques and to develop future instruments.

Wildey WL, Senia ES, Montgomery S., *Oral Surg Oral Med Oral Pathol* 1992 Oct;74(4):499-507