

## Dr. Christine Marie Melito



Dr. Christine Marie Melito graduated magna cum laude from Northeastern University with a B.S. in Cardiopulmonary Science in 1997. After she practiced as a respiratory therapist for three years, she began her dental training. She received her DMD degree in 2004 from Tufts University School of Dental

Medicine, where she graduated summa cum laude.

Dr. Melito was elected into the Alumni membership in the XI-XI Chapter of Omicron Kappa Upsilon, a National Dental Honor Society.

She then received her Masters of Science degree in Dentistry and a Certificate of Advanced Graduate Study in Endodontics from Boston University Goldman School of Dental Medicine in 2007. She has been in private practice in endodontics since that time. Dr. Melito is a member of the American Association of Endodontists, the American Dental Association, and the Massachusetts Dental Society. She presented the results of her thesis research at the 2006 AAE Annual Session in Honolulu.

Dr. Melito is a Massachusetts native and lives with her husband Mark and son Dominic in Saugus. In her spare time, she enjoys running, cooking and traveling.

10 Holden St., Ste. 5, Fl. 2  
Malden, MA 02148



# RCT and Apical Periodontitis:

## Intracanal Medications – Are They Effective?



10 Holden St., Ste. 5, Fl. 2 | Malden, MA 02148  
P: 781-321-6006 | F: 781-324-1549  
[www.maldenendo.com](http://www.maldenendo.com)

# RCT and Apical Periodontitis: Intracanal Medications – Are They Effective?

Proper diagnosis in endodontics involves not only a pulpal diagnosis, but also a periradicular diagnosis, which describes the condition of the periapical tissue when root canal therapy is initiated. These include the phoenix abscess and variations of acute and chronic apical periodontitis.

Apical periodontitis occurs as a result of a pulpal infection as microbes emanate from the root canal system to the periodontal ligament at the root's apex. The resulting periradicular lesion can cause resorption of hard tissue, inflammation and destruction of other periapical tissues. As we well know, apical periodontitis is treated by curbing the spread of microbes and reducing the possibility of re-infection by filling the root orthograde. Numerous studies have been conducted to determine the most effective solutions and intracanal medicaments to achieve the desired result. Full strength 5.25% or 6% sodium hypochlorite continues to prove its superior effectiveness to other solutions in killing most bacteria, however resistant bacterial strains such as *E. Faecalis* require the use of intracanal medicaments to be eradicated. There are several medicines that can be used to chemically disinfect the canals during this process: calcium hydroxide, phenolic derivatives, iodine-potassium iodide, chlorhexidine, and formocresol.

Published in the October 2004 issue of the *Journal of Endodontics*, a review of studies examining the use of the above medicines on a sample of 164 teeth generated some rather interesting data. The study checked the microbial culture levels at 3 different stages of treatment: before treatment, after instrumentation and irrigation and after the application of intracanal medication. Surprisingly, the study showed that 45% of the cultures that were positive after the second stage were still positive after the third stage<sup>1</sup>. Overall, 27% of the canals still showed positive cultures after the final stage of treatment. Therefore, the instrumentation and irrigation phase appears to have the most effect on antibacterial

action. Yet, it appears canals cannot always be effectively disinfected by instrumentation and irrigation alone.

Mechanical instrumentation has shown to reduce bacteria by 100-1,000 fold, but with only 20-43% of cases showing complete elimination<sup>2</sup>. Bacteria can remain in hard-to-instrument places, and chemomechanical debridement with calcium hydroxide has shown to have the best-documented results for canal disinfection<sup>3</sup>. Its antibacterial properties are attributed to high pH and its ability to destroy the cytoplasmic membrane, denaturalize bacterial enzymes and proteins, and damage bacterial DNA<sup>4</sup>.

Despite the various literature out there, the inconsistency of the variables in these studies makes drawing concrete conclusions difficult. Factors such as tooth and canal type, use of a rubber dam, the presence of aberrant anatomy, irrigant type, endodontic instruments used, disinfectant application duration, level of expertise of the dentist performing the procedure, and **most importantly** the coronal restoration vary widely during treatments and could have significant effects on microbial levels.

At *Endodontics of Malden*, Dr. Fernandes and Dr. Melito take careful consideration to determine the cases in which two step endodontic therapy is warranted. Also, to help aid in the battle of coronal leakage, we restore our access cavities with a blue self cured composite resin as the temporary restoration. Although more time consuming to remove, we have found this material to be superior to Cavit or IRM in reducing coronal leakage, decreasing the persistence of resistant bacterial strains, and ultimately increasing the long term prognosis of our cases.

## References:

1. Law & Messer 2004
2. Bystrom 1981; Bystrom & Sundqvist 1985
3. Sjogren 1991
4. Manzur et al. *J Endodon* 2007; 33(2): 114-118

## Dr. Jacinta Fernandes



Dr. Fernandes' career in Dentistry began when she was 17 years old at the Goa Dental College in Goa, India. She was awarded the B.D.S. degree in 1986 from Government Dental College and Hospital in Bombay. She participated in the "All India Entrance Exams" in 1988, placing 22nd and received the M.D.S. degree

in 'Operative Dentistry and Endodontics' at Nair Hospital Dental College in Bombay, India in 1991. She joined her family in the U.S., where she continued her education and attained the D.D.S. degree from New York University College of Dentistry in 1994. Upon completion, she attended The University of Medicine and Dentistry at the New Jersey Dental School and completed the Postgraduate program in Endodontics in 1996.

Dr. Fernandes opened 'Endodontics of Malden' in January 2005 after acquiring an existing location from the highly regarded Endodontics, Inc. Thus, accomplishing one of her professional dreams – maintaining a successful state of the art endodontic practice where her patients would receive the utmost care and respect.

Dr. Fernandes continues her education and shares her knowledge on a regular basis with her colleagues. She is a member of the American Association of Endodontists, the American Dental Association, The Massachusetts Dental Association and the East Middlesex District Dental Society. Dr. Fernandes served as the secretary of the East Middlesex District for 6 years.

When not indulged in Dentistry, Dr. Fernandes devotes her time to her family, her husband Vinny and children – Aparna, Vikram and 11 year old Analiese. A luxury for the busy doctor these days is curling up 'uninterrupted' with a good book, gardening and travelling AKA 'just getting away'!