

4th Asia Pacific Congress & Expo on

Dental and Oral Health

July 27-29, 2015 Brisbane, Australia



Roy George

Griffith University, Australia

Role of laser activated in detection and disinfection of the root canal spaces

Bacterial elimination within root dentine is important for the success of endodontically treated teeth. Pulsed Laser-Enhancement of EDTAC has previously been shown to increase removal of smear layer and enhance debridement of the root canal spaces. Shockwaves generated by lasers in fluid-filled root canal spaces generate shock waves that create shear stresses along the root canal walls, enhancing removal of the smear layer and biofilm. In addition, lasers may also provide a benefit through photothermal disinfection. However, effective and efficient laser activation of irrigants or medicament in root canal spaces depends on factors such as laser wavelength, volume of fluid being lasered, absorption characteristics of irrigants, laser energy settings, fiberoptic tip design etc. Our studies have shown that, careful selection of the correct laser wavelength, laser parameters and irrigants could provide a safe, efficient and rapid alternative to current endodontic disinfection protocols.

Biography

Roy George is a Senior Lecturer and the Unit Lead for Endodontics at the School of Dentistry and Oral Health at Griffith University since 2008. He completed his Masters in Conservative dentistry and Endodontics, PhD in Laser applications and Graduate Certificate in Higher Education. He holds an adjunct position at the University of Queensland, where he is a member of the lasers in dentistry research group. He has a particular interest in laser applications and in dental material science and has experience with a number of hard and soft tissue lasers. He also has a keen interest in dental education research and uptake of technology. He has over 15 years of teaching experience and has published over 45 peer review articles. He is currently the Editor in Chief of the *International Journal of Dental Clinics*, Editor of *Laser in Medical Science*, a peer reviewer for a number of international journals and a Member of the Royal Australasian College of Dental Surgeons.

r.george@griffith.edu.au

Notes: