

ROELAND DE MOOR



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Prof. Dr. Roeland De Moor graduated in 1984 at the Ghent University (Belgium), where he completed a MSc in Paediatric Dentistry and Traumatology, and a MSc in Restorative Dentistry and Endodontology. He received his PhD in 1995. From 1984 until 1998 he ran a private dental clinic with focus on restorative dentistry and endodontics, and became endodontist in 1997. He became associate professor in 1998, full professor in 2008 and ordinary full professor in 2014 at the Ghent University, where he teaches restorative dentistry, endodontics and dento-alveolar traumatology. He is the chair of the Department of Restorative Dentistry and Endodontology, and in charge of the three-year Master after Master programme in Endodontics. Research is focussed on root canal cleaning and disinfection a.o. with laser activated irrigation and light activated nanoparticles, the use of lasers and light in endodontics such as Laser Doppler Flow Metry and dental laser bleaching. His department has also an epidemiological research line focussing on endodontic quality, minimal invasive restorative and endodontic techniques and the use of bioactive materials in endodontics. He gives lectures worldwide on the use of light and lasers in endodontics, on dental laser bleaching, and on the application of nanotechnology for endodontic purposes. He is (co)author of more than 150 international peer reviewed articles together with the Ghent Dental Photonics Research Clustre and BIOMAD (Biomedical Applications in Dentistry).

ENHANCED ROOT CANAL CLEANING AND DISINFECTION THANKS TO IRRIGANT ACTIVATION: FASHION TREND OR REALITY?

Since the beginning of this century, an evolution in the application of endodontic irrigation solutions has taken place. Different devices to activate irrigants have been proposed and marketed. Protocols for activation of endodontic irrigants were launched and investigated. There is the general sense that increased agitation of irrigants inevitably results in better root canal cleaning and disinfection. In a recent, not yet published systematic review, we came to the conclusion that it is almost impossible to compare the efficacy of sonic versus ultrasonic irrigation, taking into account recommended inclusion/exclusion criteria for this type of review. Nevertheless a number of approaches, especially ultrasound (UAI) and laser-activated irrigation (LAI) demonstrate their superiority when compared with other agitation techniques in individual studies. With more in-depth investigations the working mechanism of both systems became clear. Apparently both approaches differ in the level of acoustic streaming and in the type and impact of cavitation. The way in which irrigation solutions are activated also clearly differs. Moreover, within each activation group a realm of activation strategies are found. So, the question arises as to whether 'real' added value disinfection and cleaning is obtained and how this has to be translated to the clinical situation (not just debris removal but also interaction with biofilms). During this presentation insight is also given in the working mechanism and efficacy of both 'sonic & ultrasonic' activation and 'laser activated' irrigation, supported by high speed images.