

ABSTRACTS & CV ÅRSMØDE 2020

Josette Camilleri

Evidence for paradigm shift in root canal obturation

Abstract

The purpose of root canal obturation is to prevent infection or re-infection of the root canal space; thus allowing the root treated tooth to remain as a functional unit in the dentition. For many years root canal obturation techniques and materials were studied by assessing the micro-leakage using various *in vitro* methods. A 'hermetic' seal was considered to be necessary for a success root canal treatment outcome. However, *in vitro* assessment methods are no longer considered valid due to the unreliability of the resultant data and the lack of correlation to the clinical scenario. There have been several developments with regard to root canal obturation techniques and materials, introduced with the aim of achieving improved quality root fillings and a better clinical outcome. In this presentation, root canal obturation techniques and materials will be discussed with an emphasis on their benefits and shortcomings and with the view of highlighting areas of development.

Objective

The aim of this lecture is to review root canal obturation techniques and materials with a view of highlighting their benefits and shortcomings. This will help provide a perspective on possible avenues of development in this area.

Learning outcomes

- Review root canal obturation techniques and materials.
- Explain the benefits and shortcomings of current root canal obturation techniques and materials.
- Describe possible avenues of development in root canal obturation techniques and materials.

Choosing the right material for pulp protection

Abstract

Management of tooth tissue loss may involve procedures involving the pulp. This necessitates the use of materials that will not adversely affect the pulp. A number of materials are available on the market. The materials vary in composition, delivery and presentation. The clinician needs to be able to choose the right material depending on the

clinical situation. The aim of this lecture is to discuss materials available for pulp therapy and also considerations for tooth restoration after pulp capping.

Objective

This lecture will look at the classical pulp capping methodology and the newer hydraulic calcium silicate cements used for pulp capping.

Learning outcomes

- Update on new materials on the market
- Learn on the effectiveness of these materials for indicated procedures
- Learn on the choice of restorative materials to layer the pulp capping materials



Josette Camilleri *BChD, MPhil, PhD, FICD, FADM, FIMMM, FHEA*

Biography

Josette Camilleri obtained her Bachelor in Dental Surgery and Master of Philosophy in Dental Surgery from the University of Malta. She completed her doctoral degree, supervised by the late Professor Tom Pitt Ford, at Guy's Hospital, King's College London. She has worked at the Department of Civil and Structural Engineering, Faculty for the Built Environment, University of Malta and at the Department of Restorative Dentistry, Faculty of Dental Surgery, University of Malta, Malta. She is currently a Clinical Senior Lecturer and Honorary Specialty Dentist at the School of Dentistry, College of Medical and Dental Sciences, Institute of Clinical Sciences, University of Birmingham, United Kingdom and visiting professor at KU Leuven, Leuven Belgium, University of Oslo, Oslo, Norway and Tehran University of Medical Sciences, Tehran, Iran.

Her research interests include endodontic materials such as root-end filling materials and root canal sealers, with particular interest in mineral trioxide aggregate; Portland cement hydration and other cementitious materials used as biomaterials and also in the construction industry.

Josette has published over 130 papers in peer-reviewed international journals and her work is cited over 6000 times. In 2018, she has been awarded the Louis Grossman prize by the French Endodontic Society and is the first female recipient of this prestigious award. She is the Editor of *Mineral trioxide aggregate. From preparation to application* published by Springer in 2014. She is a contributing author to the 7th edition of *Harty's Endodontics in Clinical Practice* (Editor: BS Chong) and *Glass ionomer*

cements in Dentistry (Editor: SK Sidhu). She is a senior editor of *Scientific Reports (Nature)*, a reviewer and a member of the scientific panels of a number of international journals and also an international lecturer.



Bodil Lund

CV

Professor i oral kirurgi och oral medicin på Universitetet i Bergen, Medicinska fakulteten. Arbetar som specialist i käkkirurgi på Haukelands Universitetssjukhus i Bergen, Norge. Är med dr i klinisk bakteriologi och bedriver forskning om antibiotika, infektion och käkkirurgi. Är ordförande i Scandinavian Association of Oral and Maxillofacial Surgeons och från januari 2020 även ordförande för nationella tandvårdsstrama som arbetar med strategiskt för rationellt antibiotikabruk i tandvården.

Abstract

Infectious diseases are likely to be a significant future challenge in health care including odontology. Advances in health care increase the group of patients susceptible to infections. Bacteria of previous minor significance because of low pathogenicity are emerging as new and increasing threats in health care due to an elevated number of immunocompromised patients. The features of infections of these patients may be atypical complicating diagnostics and treatment. The hospitals pose an artificial ecological niche making way for potentiating antibiotic resistance and other characteristics of importance for virulence. Ubiquitous organisms develop as pathogens equipped with the ability to survive harsh conditions challenging hygiene measures. Development of medical products and technological advancements may pose unexpected sources of infection proliferation. Globalization promotes dissemination of new infectious threats. Because of antibiotic resistance old infections reappears in novel shapes with few or no treatment options.

For the clinician means to prevent, diagnose, assess and treat infections is likely to be more important than ever.

Stéphane SIMON (DDS, MPhil, PhD, HDR) :



Stéphane SIMON has been qualified as Doctor in Dental Surgery in 1994 at the University of Reims. He got a certificate in Biomaterials in 1998 (University of Paris 7) and in Endodontology in 2000 (Paris 7). He taught Endodontics from 2001 to 2005 at the University of Paris 7 as Assistant Professor, and from 2006 to 2008 at the University of Birmingham (United Kingdom) as a Clinical lecturer. In 2006, he left France for joining Birmingham's Dental School team for two full years; there, 90% of his time was devoted to research, and 10% to clinical practice and teaching, as a Clinical Lecturer and Associate Specialist in Endodontics. He also got a Master Degree (MPhil) in Molecular and cell Biology in 2005 (Paris 7), and completed in 2009 his PhD in Pulp Biology in the frame of a co-supervised Thesis between the University of Paris 7 and the University of Birmingham. He is also the President of the Pulp Biology and Regeneration Group of the IADR and member of the education committee of the European Society of Endodontology.

From 2012 up to august 2019, he was a full time academic teacher/researcher, awarded as Professor in Endodontics at the Paris Diderot University and was the director of the Postgraduate Endodontic Program at Paris Diderot University (3 years full time program). His time was 50% devoted to the clinical practice and 50% to Basic Science research about Tissue engineering and dental Pulp.

Since September 2019, Pr Stéphane SIMON is on sabbatical for two years. His private practice is limited to endodontics and traumatology. He is also the founder and Academic director of the *Endo Academie*, a private company dedicated on post graduate courses for general practitioners but also Endodontic specialists. He also works as a private consultant for clinical and basic research (on pulp biology and inflammation).

He is the author of 8 Endodontic books, authored 8 chapters in clinical books, and three chapters in Tissue engineering books. He has also published 47 papers in per-reviewed scientific journals (Endodontics and Science) and more than 95 papers in clinical per-reviewed journals ; he is also one of the editor of Visualendodontics software.

In 2011, he received the Hans Genett Award from the European Society of Endodontology.

Today, his time is divided in three equals for each activity (clinical, teaching and research)

His main interest is about Tissue engineering, cell and molecular Biology of pulp tissue (Basic science and clinical practice), and modern techniques for teaching (E learning, flipped classroom, MOOCs, etc.)

“The concept of revitalization procedures”

Initially developed as an alternative to apexification for the treatment of immature teeth, the initial objective of revitalization was to regenerate the dentine pulp complex inside an empty and infected root canal. The several clinical reports and *in vivo* studies tend to highlight that if the clinical goals are achieved, the biological ones are not. Biological tissue has definitely grown inside the root canal, but is very different from pulp tissue.

Nevertheless, some clinical reports highlight a true dentine-pulp complex regeneration, even though they remain quite rare. One explanation of the difference of biological outcome could be found in the case selection.

Regenerative procedures were initially presented for the treatment of immature teeth only. Recently some investigators proposed to extend the indication to mature teeth. Only few papers highlight such a clinical approach, but biologically, this extension of indication make sense.

By considering the Regenerative procedures from the bench to the chair, it is easier to understand why case selection and clinical protocol can interfere on the final clinical outcome.

The objectives of this lecture are to review the literature on the indication and outcome of Revitalisation, and use the basic science (mainly biology) to make the link with the clinical consideration. From the bench to the chair is the best way to improve our clinical treatment. We will also discuss when and why regenerative procedure could be proposed as an alternative of apexification, and when it should not.

“How do we do it in France? I mean classical root canal treatments”

The French Root canal treatment attitude!

Root canal treatment is a part of the endodontic field, but not the only one.

Whatever the technique the clinician uses, final medical objective is always the same : To protect the bone from any infection/inflammation.

In the endodontic field, we distinguish two school of thoughts. The Scandinavian' and the american' one. Both have the same biological objectives, but mechanical ones are different. So far, there is no proof that one technique provides a better outcome compared to the other one.

For few years a new “ideology” has been raising. The minimal invasive concepts.

In this lecture, we will discuss how we consider the minimal invasive concept, and how we can perform a root canal treatment in a reasonable time and with always the same objective.

