Feature Interview
(English only)

Link to a revealing interview with Dr. Leendert (Len) Boksman about options in cementing fiber posts, and combatting the C-Factor .

WELCOME TO THE FIRST EDITION

Dear Doctor,

Welcome to the first edition of this new newsletter published by my company Recherches Techniques Dentaires, known commonly worldwide as RTD. The company was founded by my father, a dentist, and has been in the business of dental products **only** since 1968.

RTD is most famous for having invented and commercialized the original prefabricated fiber composite post. While this product range continues to evolve over 20+ years, RTD has made progress in developing and offering accessories and synchronous product lines designed to be on par with other products in their respective categories.

RTD always markets through authorized distributors, most commonly one per country, and this newsletter is being created to help these business partners inform you, your staff and your colleagues about new products and the investigations that support or validate those products.

The publication is provided free of charge as an educational service, and includes illustrative clinical cases, opinions and other contributions from clinicians and academicians around the world.

There is NO product pricing included in these newsletters, and NOT all products described herein are available in ALL countries. Check with your authorized RTD distributor to determine if products that you read about here are available in your neighborhood, and feel free to ask about them if they are not.

RTD constantly works to develop and offer its customers informative and convincing product literature on its growing line of products. The newest additions to the product line include Corecem® and Quartz Splint®. In addition to new literature for these 2 products, RTD has recently completed a new corporate identity booklet, to help tell the story of the company's evolution, innovation and market leadership in its selected markets.

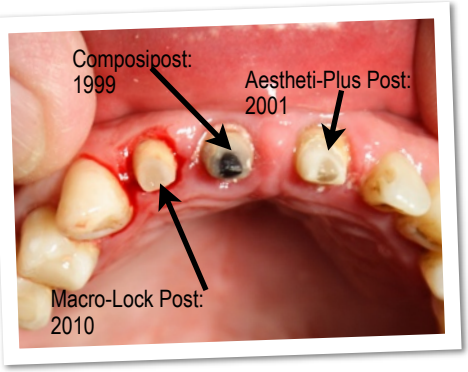
Pierre-luc Reynaud, RTD President

IN THIS ISSUE:

- New products of interest to general dentists
- Recently published research; clinical and in-vitro
- A new Clinical Case Studies: fiber posts and MORE!

New Published Research

RTD keeps an eye on the in vitro and clinical research that is being published on nearly every continent. There is plenty, and we use this newsletter to share some of what we consider to be the most significant studies, many of which distinguish RTD products and technology from the plain and ordinary.



D.T. LIGHT-POST® SIX - YEAR Clinical Trial

A Randomized Controlled Trial of Endodontically Treated and Restored Premolars M. Ferrari, A. Vichi, G.M. Fadda, M.C. Cagidiaco, F.R. Tay, L. Breschi, A. Polimeni and C. Goracci. J Dent Res 2012 91: S72

In 2007, Professor Marco Ferrari and his research team at the University of Siena Italy published 7 to 11 year clinical data that included the original Composipost,® as well as Aestheti-Post ™ and Aestheti-Plus™ quartz fiber posts. In July of this year, the same research group published six-year data in the supplement of the prestigious Journal of Dental Research.

However, this year it was the DT Light-Post, compared to similar groups of teeth, with no posts and another group with custom fiber posts. The study involved groups that included varying numbers of residual dentin walls, as well as groups with no remaining dentin and also those with a complete ferrule affect.

As expected, the DT Light-Post performed remarkably well with an overall survival rate of 99.7%, which was superior at 6 years to teeth with no post, and teeth restored with the custom fiber post, whose overall survival rates were 85.9%, and 97.2%, respectively. Even more impressive were the comparative survival rates in the groups where there was **no** remaining ferrule; 94.4% for DT Light-Post, 84.2% for the custom post and 65% with no post.

(Editor's note): RTD is very proud of the fiber post products that it produces, and it is known for making great sacrifices to optimize the mechanical properties, so that dentists everywhere can be assured of a good long-term clinical results. Lastly, RTD challenges any company producing fiber posts that compete with DT Light-Post or Macro -Lock posts to show the profession anything like these long-term, controlled clinical trials. This is because they don't exist.

MACRO-LOCK® AND FIBERCONE® POSTS; A WINNING COMBINATION

Effects of auxiliary fiber posts on endodontically- treated teeth with flared canals. Li, et al. Operative Dentistry: 2011, 36-4,380-389

This study investigated the fracture resistance and retention of endodontically treated roots with over-flared canals restored with different post systems, including one cast metal post and four fiber posts with/without auxiliary fiber posts. One hundred endodontically treated incisor roots were experimentally flared using a tapered diamond bur. The roots were restored using one of the five post systems. Fracture failure strength and pull-out strength were measured and analyzed. Macro-Lock post, combined with auxiliary fiber posts, could increase the fracture resistance of endodontically treated roots with over-flared canals. However, an effect of the auxiliary fibers on retention strength was not observed. Conclusions: Within the limitations of this in vitro study, the following conclusions were drawn (see table below):

1. The Macro-Lock post showed superior retention and fracture resistance compared with the D.T. Light-Post.
2. The Macro-Lock post combined with the auxiliary fiber posts increased the fracture resistance of the over-flared root.
3. The application of auxiliary fiber posts has no effect on the retention strength of over-flared roots.

You can read and download these articles and an impressive scientific bibliography about Fiber Posts; at <www.fiberpostinformation.info> as a Word Document or as PDF .

CLINICAL CASE STUDY # 1

Each issue will feature at least two case studies showing ABBREVIATED clinical steps using RTD products. The complete cases, with as many as 24 step photos can be reviewed at www.rtd.fr website.
The clinical cases have been donated by recognized clinicians and teachers from all over the world.
The cases are selected by a committee and the editor does not bear responsibility for the accuracy or appropriateness of the treatment plans or step sequence.

MULTI-POST RESTORATION


Fig. 1


Fig. 2


Fig. 3

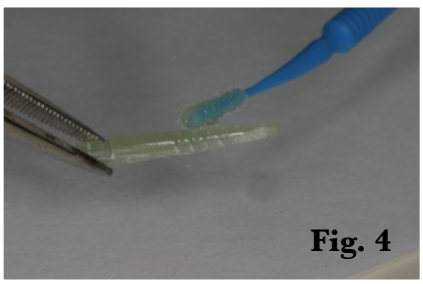


Fig. 4

This case was donated by Dr Tony Pensak, of Calgary, Canada.

If the width of coronal orifice of the prepared space significantly exceeds the widest fiber post available, the utilization of "Accessory Posts" is indicated.

The additional posts add some cost, but can still be provided in only one appointment. With this direct technique, undercuts created in the preparation are not critical.

With the old post removed, one can see the result of the corrosive process, which can negate the intended retentive benefit of the post threads. After removal of gutta percha and affected tissue, there is little remaining coronal dentin, and the space is oval-shaped (Fig. 1).

The #4 Macro-Lock® Illusion® X-RO®is the optimal post size for FIT in the apical section, at Try-In (Fig. 2), but there is remaining space. This will be reinforced using RTD Fibercone® Accessory Posts (See Product Information: Page #5.

Excess post length should be removed before cementation. Trimming can be done using a disk, or diamond bur. The post should be cleaned with alcohol.

Phosphoric acid etchant is applied, and rinsed away. The excess water is removed with a paper point, but the dentin surface should be left moist. Universal adhesive primer / bonding resin is applied to all etched surfaces (Fig. 3). The excess primer is removed with a paper point to prevent puddling. It is air - dried to evaporate the solvent. Light-cure the primer according to manufacturer's instructions, usually 20 seconds.

The same adhesive resin primer is applied to the surfaces of ALL of the posts (Fig. 4), air-dried and light-cured.


Fig. 5


Fig. 6

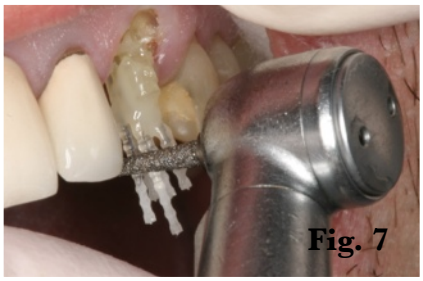


Fig. 7


Fig. 8


Fig. 9

Dual cure resin cement such as Corecem® is placed, preferably by injection, into the primed post space with narrow "root canal injection tips (Fig. 5).

The "Master" post is inserted to its complete depth, followed immediately by the Fibercones into the cement in the flared areas.

Everything is light-cured together to stabilize the posts in the cement, and leaving an air-inhibited layer on the surface.

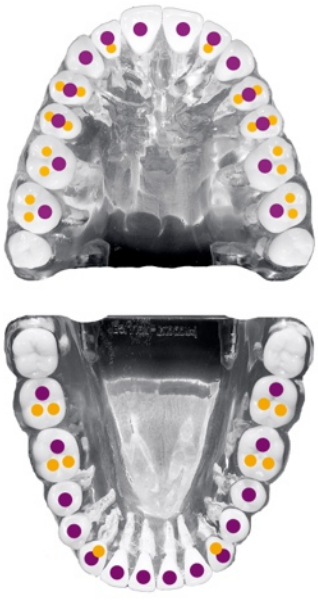
Additional Corecem is placed/injected in-between the posts, creating the bulk of the core build-up, (Fig. 6) and then light-cured again. Use of a dual-purpose flowable resin for the cementation and core build-up can avoid waste and save chair-time.

The posts and core resin are trimmed to final shape and size as needed with diamond burs (Fig. 7)

Due to an inadequate ferrule of tooth structure, approximately 2mm of gingival tissue was excised using a 980nm diode laser allowing for the apical repositioning of the labial margin onto sound dentin, creating a "ferrule effect" (Fig. 8).

Although the margin is higher than ideal, in relation to the central and lateral incisors, the restorative and prosthetic result (Fig.9) are acceptable to the patient, and the case is functional at 1 year follow-up.

VIEW THIS COMPLETE CASE AT
www.rtd.fr/pensak



PRODUCT INFORMATION

Corecem®

Corecem is a dual-cure, dual-purpose resin offered for cementation of fiber posts as well as core build up.

It is and delivered in a 9g self-mixing, push-type syringe, including the mixing tips and specially-designed root canal tips. These allow delivery of the cement directly from the syringe to the bottom of the post space. In addition, the product is highly radiopaque, and has renowned handling characteristics, according to a recent user evaluation.

Published research shows that using the same resin for core-build-up (around RTD fiber posts) and cementation - with appropriate bonding agent - does not compromise results versus separate materials. However, it can save valuable chair-time and eliminate one more critical adhesive interface.

Corecem is in a popular Vita A1 Shade.

Fibercone®

Introduced in 2008 by RTD, these accessory posts are an essential component in restoring flared, wide or unusually -shaped canal (Case Study #1).

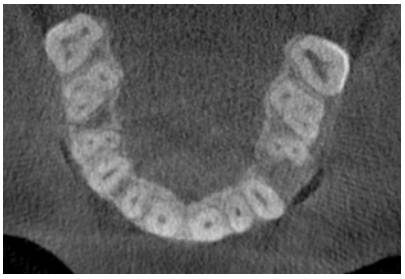
Fibercones are used most frequently as accessory next to a "Master" Post (such as DT Light-Post or Macro-Lock post); never by themselves. However they are also used in small auxiliary canals, to help prevent core rotation.

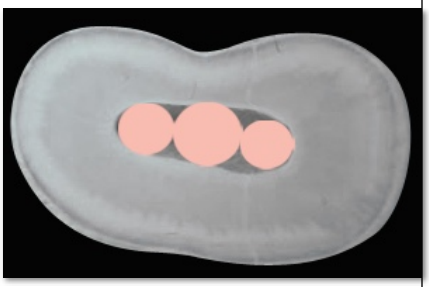
Research indicates that filling the space with "factory-made" composite of high mechanical properties is favorable to only composite or resin cement.

These very slender posts are made from the same high-performance Quartz fibers as the company's famous D.T. Light-Post®. That means good radiopacity, fatigue resistance, and quality.

Research supports the following reasons for using Accessory Posts such as Fibercone:

1. **Minimizes gap formation between the restoration & post space**
2. **Reinforcement of the restoration, inside & outside the canal**
3. **Reduces polymerization shrinkage of cement / core material**
4. **Macro-retentive coronal section for better core retention**
5. **Much stronger than direct placement composite alone**
6. **Tapered shaft, for dentin conservation and anatomy**
7. **Enhanced adaptation of flared root canals**
8. **No additional drilling required**





INTERVIEW WITH DR. LEN BOKSMAN

Leendert (Len) Boksman, D.D.S., B.Sc., F.A.D.I., F.I.C.D.

Dr. Boksman graduated from the Faculty of Dentistry, University of Western Ontario with a D.D.S. in 1972. Len then practiced in his hometown of Burlington, Ontario for seven years. In 1979 Dr. Boksman joined the Faculty of Dentistry at Western as an Assistant Professor of Operative Dentistry, shortly thereafter attaining the tenured position of Associate Professor. Len was heavily involved in clinical research while at the Faculty, and authored more than 100 articles and chapters in textbooks. In 1987 he returned to private practice full time, and has consulted for 3M/Espe and Caulk/Dentsply and other manufacturers and distributors for more than 20 years. Dr. Boksman is in private practice in London Ontario and is currently Adjunct Clinical Professor at the Schulich School of Medicine and Dentistry. Dr. Boksman lectures internationally, has published over seventy articles in the last few years on various aspects of clinical dentistry. He retired from practice in 2011, but will maintain a role of reduced responsibility of consulting, teaching and writing .

RTD caught up with Len to get his views on the art and science of bonding posts to intra-radicular dentin.

1. Dr B, what, in your view, are the 3 or 4 MOST important considerations in the successful cementation of esthetic fiber posts?

2. What is the relative importance of the surface of the post versus the surface of the interior dentin?

3. There is a “school of thought” and a limited “body of work” out there that implies that passive posts of ALL types (metal. Fiber, ceramic) are held in place by FRICTION; the media of cementation is less important than good, tight fit. Your thoughts?

4. In spite of conflicting and mixed results in the mainstream in vitro literature, there are clinicians that testify to very acceptable clinical success, at least at 2-3 years, using self-adhesive or self-etching, or Resin Modified Glass Ionomer cements for fiber posts. What has been your experience or observations?

5. Have you any thoughts on the emerging trend of using one resin for both cementation and core build-up? Is there any part of that which concerns you?

READ THE ENTIRE INTERVIEW AT <www.fiberpostinformation.info>