

Resilon Demo and Hands On – U of T -Toronto April 25 2004

On a rainy Sunday morning in Toronto, some 79 dentists assembled at the U of T dental school for the Resilon Hands On. After some initial wake-up coffee, danish and welcomes, we were led into a lecture theatre for the start of the program.

Dr. Fred Barnett did an admirable job of discussing the rationale of endodontics and the goals of treatment. It was good to see him in “full teach mode” and as I have said before while I may not agree with some of his conclusions or the validity of the literature that he cites, it is hard to argue with an Endodontist who has such thorough command of the published literature. His easy-going lecture style is never “preachy” and he speaks clearly and concisely. He seemed to take some delight in addressing me personally (sitting in the second row) on a couple of key points, always with a kind smile. If you want to know what he said....invite him to speak in your hometown. It'll be worth it.

Dr. Martin Trope - started his material with a very interesting remark. In his opening statements, Dr. Trope said something quite profound. He said that **Dentists must now decide whether we are "Technicians or Health Care Professionals"**. The difference, he said, was important in that technicians can be replaced, most often by either machines or individuals trained to perform these tasks in a step by step manner. Health Care professionals, on the other hand, are not simply technicians. Their degree confers upon them the responsibility of diagnostician, health care provider and patient advocate/educator. There is also the responsibility of being current with regards to techniques and the literature. This is how we maintain the state of the art and science of Dentistry and of our practices. It is the sum of all of these obligations that separate us from the technician. (It prompted me to write an “Op-Ed” piece for my website that dealt with this problem as it relates to treatment planning. <http://www.endoexperience.com/technicians.htm>) His comments set the stage for his discussion of “Why Resilon”?

Dr. Trope was quick to point out that he has a financial interest in Resilon. What followed was basically the same lecture that I summarized in my notes from the Schilder Symposium. Most of the illustrations used in the printed material available on Pentron's website (www.pentron.com in .pdf form. A summary of the lecture can be found at: <http://www.endoexperience.com/Schilder%20Symposium.pdf> (You'll need Adobe reader to open these .pdf files.)

Audience feedback was requested and a question was asked about the use of CaOH with Resilon. Dr. Trope is an advocate of CaOH in infected canals. (“ Canals are ready to fill ONLY when nothing more can be done to reduce the bacterial content”) We were told that the sealer also does have CaOH in it, but it is technically “bound” to the material.

I believe that the research has clearly shown that all of the CaOH can NEVER be removed from the canal space once it has been placed. A fair question is: How does this residual CaOH affect the primer and binding of the sealer? No clear answer was given and Trope admitted that research is still required in this area.

My question is this: Of ALL the dentists that are performing endodontics are using CaOH as an inter-appointment dressing on a ROUTINE basis, how many of them:

- (1) Use multiple rinses of NaOCl, EDTA to remove it?
- (2) Even HAVE Ultrasonics in their operatories!!!! Or have the proper sized tips to reach close to the apex effectively!!!

I submit that (unlike most ROOTS members) it is frighteningly few. And if they are NOT using ultrasonics, can we imagine the amounts of CaOH that will be left routinely in these canals? How will this affect the results when the material is used in the general dentist population?

One of my favorite moments of the day was when one of the participants in the back wondered out loud why we needed a new material since he insisted that he knew what the success rate of his treated cases was. What followed was an extraordinarily gentle and calm Dr. Trope addressing this Dentist's mistaken perceptions. After he had finished, I distinctly remember leaning forward to Fred and saying "I've never heard a speaker say "You're full of sh*t in such a nice way". We both had a little chuckle.

After a small buffet lunch, the 79 participants were ushered to the Student lab where about 100 lab positions had been prepared for us. In the front of the lab, the manufacturers had all their products available for immediate use. No questions asked. A global scope had been set up as well as all the necessary equipment. Each position was provided with everything we needed from sterilized explorers/scissors to instructions on how to use the material. Also set up were syringes for Smear Clear, mixing pads and spatulas, Touch and Heat Units as well as Obturas. Need a 20 gauge Obtura Needle? You got it. Need Resilon cones or Pellets – right there. Paper points? A student got some for you. Digital Radiography stations were available in adjacent rooms, manned by reps or students. For those Dentists who (even after multiple pleas by Kendo) didn't bring teeth with them, an entire bench full of people at the back of the room was busy preparing accesses in teeth for participants, so they didn't have to waste time. Grad Endo students constantly circulated among participants providing assistance and advice. There was NOTHING lacking. There were a large number of support personnel attending our every need. It may not have been "one to one" but at times it felt like it.

One of the most popular attractions was Fred Barnett's Pac Mac demo. There was a LOT of interest in this technique and I can imagine that we'll be seeing more Pac Mac cases on ROOTS from those who saw him do it. I was busy trying to work with the nine prepared anterior/premolar teeth that I brought with me. These were rinsed with Smear Clear and then dried with paper points. The Epiphany sealer couldn't be easier to use. Dispense on a pad, apply to the canal, remove excess and go.

My impressions of the material:

I really was in Toronto to see how well it worked with the Squirt Technique before deciding whether I wanted to try it in my own office. I knew that John and Joe recommended using only Schwed Regular Set for squirting because they wanted specific flow properties. This Schwed material seemed to work best without becoming too runny, as did the lower temperature versions. One disadvantage of working on "stone mounted teeth" was that they were cold. I had kept mine hydrated with wet 2x2 s and stored in a plastic bag. When I was ready to fill the canals, I washed the canals with Smear Clear and followed the instructions for placing the primer. Martin Trope emphasized that we should keep the primer within the confines of the canal (NOT long) because the its low viscosity tends to draw the sealer to it. If you put too much in the canal or don't remove it sufficiently, I imagine that it can actually facilitate excess out of the canal. The Epiphany sealer was breeze to use. A couple of turns of the syringe yielded a homogenous mix. I applied some to the canal liberally with a paper point. I replaced the 25-gauge needle that was initially in the Obtura and placed a 20 gauge in it. My anterior/premolar canals were generally prepared to a 25-40-size apex, depending on the case. I had placed wax at the ends of the roots of the teeth. I had then carved away the plaster/sawdust mix around the root apices until I reached the wax. Unfortunately, (even though I had mixed liberal amounts of sawdust in with plaster), the digital radiographs were still too light to be recognizable. ☹ (I had used this technique in grad school but we had used "regular film" and could blast away with x ray settings that were far above levels available to be used with sensors.) The initial Obtura setting of approximately 170 degrees seemed a little too low for my liking. It required a lot of effort than I was expecting to allow me to push the Obtura trigger. I was surprised at how fast the material cooled. If you didn't "jump on it" within 5 seconds with a plugger, it was hard. At that point I picked up a Touch and Heat and tried using that. I did notice that the cross links in the

material made it appear a lot more "stringy" than Gutta Percha. Condensation again was very time dependent and it obviously did not hold the heat anywhere near that of Gutta Percha. I increased the speed of injection and lessened the time it took me to pack with a Dovgan plugger.

Examination of the apex revealed literally no extrusion of Resilon but some extrusion of the sealer in most cases. I can understand now why Joe Dovgan said he was short in some of the cases he did. The only thing I forgot to bring were some GPX burs to try them for purposes of removal. I'm just wondering if the set Resilon might contribute to GPX breakage. Perhaps someone else on ROOTS has experience with this and can comment.

The last two cases were molars that were done with classic Warm Vertical Technique and cones. Again, I found the speed of obturation was critical and I believe that your assistant will need to be quick handed to ensure that you get good pressure at exactly the right time. I did not use Chloroform or solvent to remove any of the fillings but Dr. Trope showed that the material does dissolve in this solvent. The teeth were given the Grad Endo department to be sectioned and studied. I'll try to see if I can get some radiographic images from them to post. I'm sure I was the only one with the word "Squirt" marked on the side of my blocks!

One part I very much enjoyed was right at the end of the demo. As the afternoon wound down Drs. Serota, Trope, Barnett and Friedman gathered together to watch the final few stragglers finish up. I assumed my "fly on the wall" posture in the group and was treated to some great discussion about many different endodontic topics, from ROOTS to academia, to clinical topics and materials. Kendo was his usual relentless self in trying to convince Shimon Friedman to give us a Guest Day on ROOTS. (Like Kendo's said to me often "You miss 100% of the shots you don't take." Keep firing Ken.) One of the things that Dr. Trope addressed was the apparent "lack of set" of Epiphany when it was left out on a mixing pad. (A Grad Endo student had told me he was concerned about this.) Trope said that Oxygen interacts with the topmost layer of the sealer when it is exposed to air and that if you checked under this layer the sealer was indeed set. He assured us that the sealer did set in the canal. Before I know it, it was time to leave.

In summation, a first class demo. The instructors, the Grad students and Staff at the U of T did a great job. I'm glad I flew in to Toronto.

PS Kudos to the exhibitors for supporting this effort. (I had dinner that evening with one exhibitor who said they did very well.)

See you all at the AAE.