



Message from the Director

It's hard to believe that summer is already over, but it also marks the beginning of an academic calendar. The start of a new school year is always exciting, but this year it is particularly so. Our new dean, Dr. Phil Marucha, officially starts on September 1st. Interim dean Gary Chiodo has been a great backer of PROH, and we thank him for his support. We look forward to an equally strong relationship with Dr. Marucha. For those of you who have not had a chance to meet Dr. Marucha, I am pleased to let you know that he will offer some opening remarks at this year's annual PROH conference on October 18th, 8AM-1PM at the Portland World Trade Center. He will be attending the conference, so that should give everyone the chance to meet Dr. Marucha, and let him know how important PROH is to the practicing dentists in Oregon!

Speaking of the PROH conference, we have a great line-up of topics and speakers this year. The changes we made to the format a couple of years ago have proven to be well received, so we will keep with them. We will have six presentations providing evidence-based reviews of clinical questions that you, the PROH members, submitted. The presentations will be 30 minutes, plus 10 minutes for Q&A, for a total of 40 minutes for each presentation. We will take two breaks over the course of the meeting to allow plenty of time for interaction among the members and for you to chat with Dean Marucha. Please plan on attending, and let your friends and colleagues

know so they can sign up as well. Please see the announcement on page 3 of this newsletter for more information on the conference.

We continue our efforts to obtain funding for research projects. The subject of cracked teeth is a primary theme for our funding efforts, since that is one of the top subjects you have identified as an area of clinical importance. We are pleased to have recently received a dean's grant to do an assessment of crack characteristics in extracted teeth for the purpose of developing an initial crack risk assessment system. A description of the study can be found at the bottom of this page. We will be sending out a recruitment email in the next few weeks to identify 25-30 dentists who are willing to participate in this research project.

Finally, on a sad note, we want to remember Dr. Kinley Adams. Kinley was an excellent dentist, an ardent believer in dental continuing education, and a great supporter of PROH. We offer our condolences to his family. He will be missed.



Thomas J. Hilton, D.M.D., M.S.
PROH Director, hiltont@ohsu.edu



Tom Hilton, D.M.D., M.S.

New PROH Study on the Horizon

Diagnosing and treating cracked teeth continues to be a popular topic amongst PROH dentists. In an effort to add to the body of knowledge on cracked teeth, PROH is undertaking a new research project that will result in the development of a categorization system for use by dentists to determine the timing and nature of treatments for cracked teeth to improve dental health.

Twenty-five to 30 dentists will participate in two 4-hour sessions at the School of Dentistry. Session 1 will include training on how to assess cracked teeth for the purposes of this study and participants will be randomly assigned 25 extracted teeth to evaluate. In addition to conducting visual examinations of the extracted teeth, periapical radiographs and photographs will be available for review to enhance the evaluations. Dental students will assist by recording findings during the assessments. This is expected to expedite the evaluations and we believe the students will enjoy interacting with practicing dentists who will be great role models by demonstrating continued involvement in research.

After Session 1, OHSU researchers/faculty will section and microscopically autopsy the evaluated teeth to identify the full extent

IN THIS ISSUE

"Dental Myths & Controversies VI".....2

Tenth Annual PROH Conference Registration.....3



(Continued on page 4)

“Dental Myths & Controversies VI” Continuing Education Course

The Ninth Annual PROH Conference was held on Friday, November 2, 2012 at the World Trade Center in Portland. Topics for “Dental Myths & Controversies VI” were selected by surveying PROH members. Six select faculty from OHSU and the University of Washington identified the opposing viewpoints, presented a review of the relevant research and their position on the topic based on their understanding of the evidence, and answered questions. Below is a summary of the course.



“New kid on the block: Are all-ceramic restorations ready to replace traditional metal-based indirect restorations?” by Steven Gold, D.D.S., Assistant Professor, Department of Restorative Dentistry and Group Practice Leader at OHSU.

All-ceramic restorations are popular due to esthetic demands, cost, conservation of tooth structure (as compared to porcelain-fused-to-metal), and the integration of digital technology. Dr. Gold cites several challenges to obtaining a high-quality base of evidence on all-ceramic restorations: variables found in all ceramics (materials, usage, method of manufacture, luting and parameters of “success”), the correlation to reality, the scarcity of independent funding and influence of commercial interests, and rapidly changing technology that is not conducive to long-term clinical studies. In summary, the evidence indicates that 1) all-ceramic restorations consistently show at least a 95% success rate at approximately 5 years to 90% at approximately 10 years, 2) most failures are due to fracture, 3) there are higher success rates on anterior teeth, 4) there are higher failure rates for multi-unit and implant restorations, and 5) CAD/CAM margins are acceptable with current technology. In conclusion, all-ceramic restorations are not ready to replace traditional metal-based indirect restorations but they are a valuable and viable addition to current restorative options.



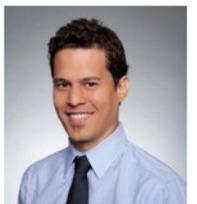
“Periodontal and cardiovascular diseases: Is this a chicken or the egg story?” by Jim Katancik, D.D.S., Ph.D., Associate Professor and Chair, Department of Periodontology at OHSU.

The risk factors shared by periodontal disease (PD) and atherosclerotic vascular disease (ASVD) are increasing age, smoking, alcohol abuse, race/ethnicity, education and socioeconomic status, male sex, diabetes mellitus, and overweight or obesity. The direct pathogenic mechanism linking PD and ASVD is bacteremia and vascular injury by periodontal pathogens potentially contributing to atheromatous plaque formation. The indirect mechanisms are systemic inflammation and molecular mimicry. Current evidence supports the concept that PD may be a contributing, but not sole factor, for developing ASVD.



“Pulpotomy and restoration of primary teeth: What goes in them and what goes on them?” by Elizabeth Palmer, D.M.D., Assistant Professor, Department of Pediatric Dentistry at OHSU.

Dr. Palmer reviewed current literature on pulp therapy treatment options for large carious lesions encroaching on the pulp of primary molars including formocresol (FC) pulpotomy, ferric sulfate (FS) pulpotomy, mineral trioxide aggregate (MTA) pulpotomy, sodium hypochlorite (NaOCl) pulpotomy, electrosurgical (ES) pulpotomy, and indirect pulp therapy (IPT). Research to date indicates that FC and FS have similar clinical and radiographic success, MTA has a higher success rate than FC, NaOCl has a higher success rate than FS, and ES is comparable to FC. IPT shows higher long-term success rates than any pulpotomy type other than MTA. IPT is less expensive, has fewer potential side effects, and does not exhibit early exfoliation as pulpotomy does. Types of restorations for primary molars treated for reversible pulpitis include stainless steel crowns (SSC), interim restorative material (IRM), amalgam, and bonded resins. Success rates for SSC are higher than for IRM. SSC and amalgam restorations succeed similarly; however, a one surface amalgam is significantly better than a two surface amalgam. Amalgam and resin-based materials perform similarly.



“Do fiber posts provide adequate support for restoring root filled teeth?” by Roberto Macedo, D.D.S., Ph.D., Assistant Professor, Department of Restorative Dentistry at OHSU.

Fiber posts are desirable because they 1) conserve tooth structure, 2) provide an elastic modulus similar to dentin, 3) strengthen crowned endo-treated teeth, and 4) reduce the incidence of catastrophic fracture. They do not improve fracture resistance. A 1.5 to 2 mm ferrule has shown to significantly improve resistance to fracture as compared to teeth restored without a ferrule. When fiber posts fail, it is most frequently caused by loss of retention. Resin cement used with fiber posts has shown to increase post retention, relieve stress within the root (acts as a shock absorber), optimize fracture patterns, increase failure resistance, and improve the apical seal. In summary, a high level of clinical success is achievable with most of the current restorative systems (fiber post, composite build-up, resin cementation) keeping these tips in mind: avoid bacterial contamination of the root-canal system, provide cuspal coverage for posterior teeth, preserve radicular and coronal tooth structure, use posts with adequate strength in thin diameters, provide adequate post length for retention, maximize resistance form by including an adequate ferrule, and use posts that are retrievable (not ceramic or zirconium posts).



“You’re under arrest! Halting and preventing caries: Topical fluoride or silver nitrate?” by Steve Duffin, D.D.S., M.B.A., Affiliate Assistant Professor at OHSU and private practitioner in Keizer, Oregon.

Topical fluoride is a preventive agent and it remineralizes tooth structure. Silver nitrate is an antimicrobial agent that arrests caries and was described by GV Black in 1908. Using these two agents in combination enhances caries arrest efficacy. Dr. Duffin’s use of this combined protocol in his practice has led to increased access to care, fewer emergency visits, and fewer hospital cases. Arresting caries and then restoring function and esthetics in a disinfected lesion is his approach.

(Continued on page 4)

10th Annual PROH Conference “Dental Myths and Controversies VII” Friday, October 18, 2013

World Trade Center – Auditorium – Bridge Level - 121 SW Salmon - Portland, OR 97204

Join us for an exciting, fast-paced morning with six speakers addressing some of those confusing and contentious myths and controversies that face us in dentistry today. Select faculty from OHSU will each introduce their topic, identify the opposing viewpoints, review the relevant research, present their position on the topic based on their understanding of the evidence, and answer your questions. Topics and speakers are as follows:

“Are we there yet? Can that laser really treat periodontal disease?” by **Jim Katancik, D.D.S., Ph.D.**, Associate Professor and Chair, Department of Periodontology at OHSU.

“CAD/CAM or traditional restorations: Maybe computers REALLY can do everything!” by **Steven Gold, D.D.S.**, Assistant Professor, Department of Restorative Dentistry and Group Practice Leader at OHSU.

“Fluorides or fillings: What’s the best protocol for incipient/early caries?” by **Juliana da Costa, D.D.S., M.S.**, Associate Professor in the Department of Restorative Dentistry and Restorative Dentistry Preclinical Director at OHSU.

“Splint design: Grinding out the facts.” by **Scott Dyer, D.M.D., M.S., Ph.D.**, Adjunct Assistant Professor in the Department of Restorative Dentistry at OHSU and private practitioner.

“When you absolutely, positively have to restore below the gums, what do you use?” by **Tom Hilton, D.M.D., M.S.**, the Alumni Centennial Professor in Operative Dentistry at OHSU and Director of the PROH network.

“Stressing out over composite fill technique: Do bulk fill composites work?” by **Jack Ferracane, Ph.D.**, Chair of the Department of Restorative Dentistry and Division Director of Biomaterials and Biomechanics at OHSU. He is also a principal investigator for the PROH network.

Course Times & Fees:

Registration and Continental Breakfast: 7:15-8:00 Course: 8:00-1:00

Registration: \$175 Dentist & \$145 Staff

*Early Fees: \$150 Dentist & \$125 Staff

*Early fees are applicable until October 1st.

Registration:

Online registration is available at <http://www.oragd.org/events/title-proh-conference/>.

You can also register by calling 503.494.8857.



Approved PACE Program Provider
FAGD/MAGD Credit
6/1/2011 to 5/31/2015



“Dental Myths & Controversies VI” Continuing Education Course — *continued*

(Continued from page 2)



“I can’t eat ice cream...or can I? Treatment of dentin hypersensitivity” by John Wataha, D.M.D., Ph.D., Professor and Chair, Department of Restorative Dentistry at the University of Washington.

Dentin hypersensitivity (DH) occurs in about 1 in 8 individuals, is more common in women, primarily occurs on molars and premolars, is chronic, but is not a major problem for most people. There is a higher risk of DH when gingival recession is present and some risk with tooth whitening or with non-carious cervical lesions. Fluorides are the oldest of treatments but studies have lacked good control/placebo groups. Some studies may have been influenced by corporate sponsors. Casien phosphopeptides-amorphous calcium phosphate as an alternative treatment lacks sufficient clinical trial evidence to determine its long-term effectiveness. Several types of oxalates have been heavily marketed but quality evidence is lacking to show efficacy. Arginine-calcium carbonate is early in development; no long-term studies, large scale studies or meta analyses are available yet, although initial results are promising. Dr. Wataha suggests a treatment progression of: ruling out other causes/factors, at-home topical treatments, in-office topical treatments, in-office minor invasive treatments, and in-office major invasive treatments. It is important to balance the magnitude of the patient’s problem against the aggressiveness of the treatment strategy. When evaluating new treatments/products, consider the evidence. Are the studies in-vitro? Are the studies clinical trials? Who sponsored the study? At this point in time, treatment of dentin hypersensitivity suffers from lack of a gold standard or even a consensus on a definition for the condition.

New PROH Study on the Horizon — *continued*

(Continued from page 1)

of the crack system, both externally and internally. They will then collate all data and develop a preliminary categorization system. It is anticipated that factors to be included will be tooth number, location of crack, direction of crack, staining, etc.

During Session 2, dentists will review the results of Session 1, take a survey to evaluate the preliminary crack categorization/risk assessment system, and participate in a group discussion to refine the system into a practical tool. Dental students will again participate.

OHSU researchers/faculty will review the new data and refine the cracked teeth categorization system. The results of this study will be included in the next grant application to the National Institute of Dental and Craniofacial Research for a large scale study of cracked teeth.

Contact PROH

Thomas J. Hilton, D.M.D., M.S.
PROH Director
503.494.8672
hiltont@ohsu.edu

Jack L. Ferracane, Ph.D.
PROH Investigator
503.494.4327
ferracan@ohsu.edu

Cindy G. Barnes, B.S.D.H., M.B.A.
PROH Network Manager
541.323.1063
barnesc@ohsu.edu

Steering Committee

Private practitioners:

Sean Benson, D.D.S., Baker City

Mark Driver, D.M.D., Roseburg

Mark Jensen, D.M.D., Bend

Walt Manning, D.M.D., Albany

George McCully, D.M.D., Eugene

John Shurtz, D.D.S., Salem

Office manager – open position

Kinley K. Adams, D.M.D.

Kinley K. Adams, D.M.D.

August 11, 1953 -
June 30, 2013

Our heartfelt condolences to the family and staff of Dr. Kinley Adams who perished in a climbing accident on Mount Hood while training for an ascent of Ama Dablam, a 22,349-foot peak in the Himalayas.

Dr. Adams received his DMD from OHSU in 1979 to become the third generation of Adams dentists in Salem. In addition to his private practice, he was a regular volunteer through the Give Kids a Smile program. He routinely rode his bike to work and he was a longtime violinist in the Salem Pops Orchestra. Dr. Adams was an avid supporter and participant in the PROH network. We will miss him.

