"Dental Myths & Controversies V" Continuing Education Course

The Eighth Annual PROH Conference was held on Friday, November 4, 2011 in Portland at the World Trade Center. In keeping with our mission of promoting evidence-based dentistry, we once again focused on "myths and controversies" that face us in dentistry today. Six OHSU faculty members introduced their topic, identified the opposing viewpoints, reviewed the relevant research, and presented their position on the topic based on their understanding of the evidence. Each presentation was followed by a brief question and answer period. Below is a summary of the course.

"Implant supported RPDs: Valuable treatment option or outdated modality?" by Scott Dyer, D.M.D., M.S., Ph.D., adjunct assistant professor in the department of restorative dentistry and a private practitioner.
Options reviewed for replacing missing teeth were 1) do nothing, 2) removable partial denture, 3) fixed partial denture, and 4) implant with removable partial denture. After taking all factors into account, it is accepted that no partial can be designed/constructed that will not be destructive in the mouth and it is not possible to control all forces, but the proper distribution of forces leads to clinical success. Strategic implant placement replaces key missing abutments (canines and first molars), decreases cantilever (distal position), decreases stress on remaining dentition (mesial position), and supports prosthetic occlusion. Endosseous implants result in the best survival rates for teeth adjacent to an over-partial.

"Should every extraction site be grafted?" by Brad McAllister, D.D.S., Ph.D., adjunct assistant professor in the department of periodontology and a private practitioner.
Dr. McAllister discussed many of the considerations the clinician must take into account when trying to decide if an extraction socket should be grafted. CBCT studies that demonstrate how thin the buccal plate typically is in the anterior maxilla were reviewed and how this can impact the amount of bone remodeling with and without bone grafting. How bone grafting can be helpful in implant cases was also reviewed, with an emphasis on the anterior maxilla where having insufficient bone buccal to the implant was shown to result in more gingival recession.

"Cold sores: Preventable, treatable, or inevitable?" by Cynthia Kleinegger, D.D.S., M.S., associate professor in the department of pathology and radiology and a practitioner in the OHSU Faculty Dental Practice.
Approximately 1/3 of the US population suffers from recurrent herpes labialis, typically experiencing 1 to 6 episodes per year. A variety of topical and oral antiviral medications are available to treat this problem. Numerous research studies have attempted to determine the efficacy of these treatments. The majority have compared an individual drug to a placebo rather than two or more drugs to each other. The results have been mixed and it is difficult to compare studies due to variations in study designs and outcomes measured. Additionally, results that may be statistically significant do not necessarily translate into clinical significance. It does appear that some patients can be expected to benefit from antiviral therapy, although it is not possible to predict which patients will benefit and to what degree. In general, research indicates that oral medications are more effective than topical medications and that topical medication is more effective in a cream base than in an ointment base.

"Over-the-counter dental products: Do they work (Part 2)?" by Erinne Lubisich, D.M.D., assistant professor in the department of restorative dentistry and a private practitioner.
Xylitol: There is strong evidence supporting the use of xylitol to prevent dental caries. More research is needed to determine optimal dosing. *Mouthrinses for halitosis:* Rinses containing chlorhexidine, cetylpyridinium chloride, and chlorine dioxide/zinc are effective in reducing halitosis. *Mouthrinses for gingival inflammation:* Chlorhexidine, cetylpyridinium chloride (Crest ProHealth, Cepacol, and Breath Rx), and essential oils (Listerine) are effective agents in rinses to reduce plaque and inflammation. *Fluoride Mouthrinses:* Regular supervised use of fluoride mouthrinse by children reduces tooth decay, even if they drink fluoridated water and use fluoridated toothpaste. More research is needed on adverse effects and acceptability of fluoride mouthrinses. Research evaluating a relationship between mouthwash use and oral cancer is inconclusive.

"Which endodontic rotary system works best? by Brian Whitten, D.D.S., assistant professor and pre-doctoral program director in the department of endodontology.
The most extensively studied aspects of what is "best" are shaping ability and avoiding instrument fracture. All NiTi rotary instrument systems shape canals well and better than hand instruments, all are subject to cyclic fatigue and all have torsional load limits. Evidence to incorporate electropolishing or M-Wire as standard procedures is inconclusive. Dr. Whitten emphasized that it is not the instrument chosen to use that is important but rather how the instrument is used. Important technique factors are straight-line access, glide path, early coronal flaring, crown down preparation, following the manufacturer's recommendations (speed, torque, and sequence), pecking/brushing motion, use of NaOCl (lots of it!), maintaining patency, light apical forces, being considerate of anatomy, replacing files often, considering hybrid techniques, and, most importantly, the training period/experience. The majority of US endodontists use rotary NiTi in 100% of cases, torque-control motors at 300 rpm, crown-down technique with NaOCl, and discard instruments after 2-4 patients or after even a single use in challenging canals.

"Caries prevention in a "green" world: Is fluoride a toxin or a treatment? by Eli Schwarz, D.D.S., M.P.H., Ph.D, professor and chair of the department of community dentistry.
As with all substances, dosage determines toxicity. The probable toxic dose (PTD) of fluoride is 5 mg/kg body weight. The new recommended level of fluoride in drinking water is 0.7 parts per million. Fluoride remains the cornerstone of modern non-invasive dental caries prevention and management. The most cost-effective and equitable population preventive measure is still water fluoridation. The multiple sources of fluoride and expansion of fluoride therapies have created a complex scenario for evaluating total fluoride ingestion and isolating the beneficial effects of water fluoridation. Dental professionals must use available evidence about fluoride benefits and adverse effects to balance their own use and what they recommend to the public.