

“Dental Myths & Controversies III” Continuing Education Course

The Sixth Annual PROH Conference was held in Newberg at A-dec’s spacious and comfortable Education Center on November 13, 2009. The continuing education course focused once again on “Dental Myths and Controversies,” in keeping with PROH’s mission of contributing to the advancement of evidence-based dental practice.

The fast-paced morning had a power-packed lineup of five OHSU dental faculty and one OHSU dental student who addressed some of the most contentious myths and controversies facing us in dentistry. Each speaker had approximately 30 minutes to introduce their topic, identify the opposing viewpoints, review the relevant research, present his/her position on the topic based on the evidence, and then answer questions from the audience. Below is a summary of the course.



“What are the long term effects of teeth whitening?” by **Juliana da Costa**, D.D.S., M.S., assistant professor in the department of restorative dentistry and a practitioner in the OHSU Faculty Dental Practice

There is strong evidence of effectiveness for the three tooth whitening methods: at-home, in-office, and over-the-counter. The use of a light source to increase the whitening effect is still debatable. Some tooth color relapse occurs with all whitening systems; however, the whitening effect is still evident. Tooth sensitivity and/or gingival irritation are experienced in 15 to 78 percent of patients; however, it is usually mild to moderate and transient; and is considerably less when potassium nitrate, fluoride, or amorphous calcium phosphate is in the formula. Tooth whitening is a safe procedure and clinical studies have not shown the development of

pre-neoplastic or neoplastic oral lesions.



“Amorphous Calcium Phosphate (ACP): Is it effective in remineralization therapy?” by **John Mitchell**, Ph.D., associate professor in the department of restorative dentistry

Of the more than 4,000 articles found in Dr. Mitchell’s literature review, his inclusion/exclusion criteria narrowed the examination to 13 articles. One ACP study showed root remineralization with 42 radiation patients. Nine of ten randomized clinical trials of casein phosphopeptide (CPP)-ACP resulted in subsurface remineralization. One in-vivo study resulted in a reduction of white spot lesions that was visually significant but DIAGNOdent showed no difference. A large two-year chewing gum study showed an 18 percent reduction in caries progression. It was pointed out that nine of the ten articles favorable to ACP were written by a research group

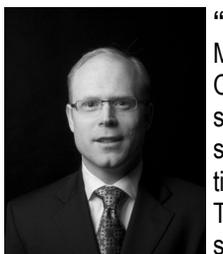
that holds the patent for CPP-ACP. Dr. Mitchell concludes that there is insufficient clinical trial evidence (both qualitative and quantitative) to make any recommendations.



“Are local chemotherapeutic agents effective in treating periodontal disease?” by **Steven Hokett**, D.D.S., M.C.R., assistant professor in the department of periodontics and a private practitioner

Conclusions regarding local delivery of chemotherapeutic agents are as follows: they do not replace the necessity for thorough scaling and root planing (SRP); there is no best device for controlled release of agents; SRP is only a monotherapy; there is no universal drug for use on all patients; use of these agents does not justify extending the time interval of maintenance visits; and there is no data to support a reduction in the need for periodontal surgery. Systemic drugs used in conjunction with SRP are as effective as local delivery. Local delivery is recommended in cases with refractory/recurrent periodontitis or with medically compromised patients. There is limited research to also support usage with ailing/failing implants. Dr. Hokett uses these agents when localized

recurrent and/or residual probing depth of 5mm and inflammation are still present following conventional therapies.



“Does occlusion affect the health and stability of the stomatognathic system?” by **Scott Dyer**, D.M.D., M.S., Ph.D., assistant professor in the department of restorative dentistry and a private practitioner

Of 57 epidemiologic studies reviewed, 22 found no relationship between occlusal factors and TMD signs/symptoms while 37 did find a relationship. There is not a simple cause-effect relationship. No consistent occlusal condition led to TMD; occlusal conditions that did lead to TMD did not always -- or even a majority of the time -- lead to TMD. There is no single cause that leads to signs/symptoms. The major factors associated with TMD are occlusal condition, trauma, emotional stress, deep pain input and parafunctional activity. TMD signs/symptoms develop when normal function is impacted by an event (high crown, deep pain input, emotional stress, etc.) that exceeds the physiologic tolerance of the joint. Local changes (high crown, tissue trauma,

deep pain, etc.) may be resolved by dental treatment but systemic changes (stress, CNS stimulation, etc.) are not likely to respond to dental therapies.

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“Does a link exist between human papillomavirus and oral/oropharyngeal cancer?” by Jeff Stewart, D.D.S., M.S., associate professor in the department of pathology & radiology

A systematic review and meta-analysis included 17 studies that found the following associations between human papillomavirus (HPV) and head and neck cancer: 1) the association is strongest with tonsillar and oropharyngeal cancer; 2) the magnitude of the association is consistent with an infectious etiology by HPV; and 3) the method of viral detection may be an important source of variation of association in different studies. Multiple studies demonstrate that patients with HPV positive oropharyngeal cancer are more responsive to treatment and have a better prognosis than patients with HPV negative oropharyngeal cancer. Current evidence sup-

ports that there is a strong association between HPV and oropharyngeal cancer with a weak association between HPV and oral cancer.



“How do smoking, periodontitis, and diabetes affect implant success and survival? How can scientific evidence be found to answer a clinical question?” by Jason Walker, a fourth year dental student who graduated in June 2010

A team of dental students reviewed the literature as part of the treatment planning process for their 61-year-old male patient. The tools they utilized were PubMed and the ADA Center for Evidence-Based Dentistry. The literature indicated that periodontitis decreases implant success by 11 percent, any level of smoking decreases implant success and survival by 8 to 17 percent, and diabetes decreases implant survival by 2.2 to 10 percent.

Some of the limitations they noted in the literature were that: 1) there is no research on the effect of the combination of periodontitis, diabetes and smoking on implant success/survival, 2) the definitions of “success” and “survival” of implants are not standardized; and 3) more analysis of the combination of risk factors is needed as only one meta-analysis was found.