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Dear Colleague:

Through ongoing research and discovery we continue to see ongoing treatment success in our periodontal and implant practice. Evidence continues to emerge at an exponential rate linking chronic disease, including periodontal diseases with inflammation, and the consequence of inflammation and systemic diseases.

Through this quarterly newsletter, we wish to share some of the recent clinical studies that are made available to us, as well as open communication with your office.

Our website www.drcolinrichman.com is available for all dentists and patients to use for patient and staff education. It has a myriad of useful information relative to patient education, periodontal diseases and dental implants.

Regards,

Dr. Colin Richman

The American Journal of Cardiology and Journal of Periodontology Editors' Consensus: Periodontitis and Atherosclerotic Cardiovascular Disease

Friedewald, V.E., Kornman, K.S., et al.
J Periodontol July 2009 1021-1031

The association between periodontitis and atherosclerotic CVD has received considerable attention. The findings of these studies, however, have varied greatly, ranging from determinations of no causative relationship between periodontitis and CVD to strong causative connections between the two conditions. Reasons for the discrepancies in the results of these studies include (1) variations in study populations, including differing age groups, ethnicities, and geographic locations, and (2) differing measures and definitions of periodontitis, with some studies based only on clinical measures (i.e., probing depth, bleeding on probing, tooth attachment level) and other studies, in which the relationship appeared stronger, based on non-clinical measures such as systemic antibody response or radiographic evidence of alveolar bone loss. Increased carotid artery intimal-medial thickness measured by ultrasound, which is associated with increased risk for acute myocardial infarction and stroke in subjects without histories of CVD, often occurs in patients with periodontitis, suggesting that subclinical atherosclerosis is present in many patients with periodontitis.

Although some past studies have not supported a causal relationship between periodontitis and CAD, appropriate statistical analysis of data linking CAD and periodontitis concluded that periodontal disease is a risk factor or marker independent of traditional CAD risk factors, with relative risk estimates ranging from 1.24 to 1.35. Additional analysis also found significantly increased prevalence and incidence of CAD in patients with periodontitis, again raising the possibility that periodontitis independently predicts CAD. *The authors conclude that further studies are needed to better define the relationship between the two diseases. Analysis of >1,200 men in the Veterans Affairs Normative Aging and Dental Longitudinal Studies determined that in men aged <60 years, there was a "significant dose-dependent association" between CAD prevalence and periodontitis, with a hazard ratio of 2.12 (1.26 to 3.30) when using clinical and radiographic criteria for periodontitis. This association was independent of standard atherosclerotic CVD risk factors or socioeconomic status. Periodontitis prevalence also has been correlated with angiographic evidence of CAD.*

Periodontitis and Obesity

Kim EJ, Jin BH, et al.
J Periodontol. 2011 Apr;82(4):533-42

The purpose of this study was to determine whether there is an association between periodontitis and obesity among adults. In 2007, 4,246 subjects, >19 years of age, were selected to participate in a cross-sectional survey conducted for Disease Control and Prevention. Participants underwent a periodontal examination and anthropometric measurements,

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Obesity...*continued*

and were asked to complete a questionnaire about their socioeconomic status and overall health status. Body mass index (BMI) and waist circumference (WC) were used as measures of overall body fat and upper body fat. Standard BMI and WC cutoff points were used, as established by the World Health Organization for the Study of Obesity. Periodontal status was assessed by Community Periodontal Index and periodontitis was defined as ≥ "code 3." Appropriate statistical analyses were carried out, adjusting for the following variables: sex; age; household income; bedtime tooth brushing habits; use of dental floss; use of an interproximal toothbrush; presence of active tooth decay; the number of decayed, missing, or filled permanent teeth; diabetes mellitus; and present smoking status.

Results found that there was no association between BMI and periodontitis but the authors did find a significant association between abdominal obesity and periodontitis. The authors concluded from the results of this study that high waist circumference seems to be associated with periodontitis, whereas body mass index does not. This finding shows that abdominal obesity is significantly correlated with periodontitis.

Evaluation of Peri-implant Marginal Bone Loss Using Modified Abutment Connections at Various Crestal Level Placements

Veis A, Parissis N, et al.
Int J Periodontics Restorative Dent. 2010 Dec;30(6):609-17

The purpose of this study was to evaluate crestal bone loss around 282 two-piece implants with straight (n = 193) and platform-switched (n = 89) abutment connections after placement at various crestal levels. Implants were assigned into two groups according to straight and platform-switched abutment connections. Each group was further subdivided into three groups depending on the location (supracrestal, crestal, or subcrestal) of the implant cervical platform. Linear measurements of bone resorption were made from the implant's platform to the first point of bone-to-implant contact at the time of implant placement and 2 years postrestoration. Data were statistically analyzed.

Statistically significant differences were found between subgroups in both straight and platform-switched categories. The only nonstatistically significant difference arose when comparing the supra- and subcrestal locations in the straight abutment connection group. The platform-switched group exhibited significantly less bone loss only in subcrestal locations. *The platform-switched concept was not beneficial during the overall comparison, but it was for the subcrestal location of the abutment connection. Crestal placement of the implant-abutment connection resulted in higher marginal bone resorption in both straight and platform-switched abutments.*

Complications of Oral and Peri-oral Piercing

Hennequin-Hoenderdos N, Slot D, et al.
Int J Dent Hyg. 2011 May;9(2):101-109

The purpose of this study was to systemically search the literature for case reports concerning adverse effects associated with oral and peri-oral piercings on oral health and/or general health. MEDLINE and the Cochrane Central Register of Controlled Trials (CENTRAL) were searched up through 1 April 2010 to identify appropriate studies.

Independent screening of the titles and abstracts identified 1169 papers from MEDLINE and 73 papers from CENTRAL. Subsequently, 67 papers describing 83 cases were processed for data extraction. The case reports described complications in oral and general health. In this review, 96 complications were described for 83 cases. Of the 96 reported complications, 81% occurred in cases of tongue piercings, 20% in cases of lip piercings and 1% in cases of other oral piercings. In eight cases, subjects had two oral and/or peri-oral piercings. Gingival recession was the most frequently described complication. Periodontitis and gingival recession were seen at the central mandibular incisors. *Tooth fracture is mostly reported in subjects with tongue piercings. Among the case reports, there were complications like normal post-operative swelling and localized inflammation but also more serious complication that may even have been life threatening. Also in the long term, piercing may be associated with gingival recession and tooth fracture. Therefore, oral and/or peri-oral piercings are not without risks. Patients considering a piercing should be made aware of this. Those patients wearing a piercing should be screened by a dental professional for possible complications on a regular basis.*