
Colin S. Richman, D.M.D., P.C.
D.M.D., B.D.S., L.D.S., R.C.S., H.D.D.
Diplomate, American Board of Periodontology

**Periodontics, Oral Medicine and Dental Implants**
1305 Hembree Road, Suite 104
Roswell, Georgia 30076

Telephone: 770.442.1010 Fax: 770.475.7658
Cell phone: 404.784.7272

email: csr@drcolinrichman.com



*Summer 2010 • A Quarterly Update*


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*

## Periodontal Bacteria and Hypertension

Desvarieux M, Demmer RT, et al.
*J Hypertens. 2010 May 5*

Chronic infections, including periodontal infections, may predispose individuals to cardiovascular disease. The authors in this study investigated the relationship between periodontal microbiota and hypertension. Six hundred and fifty-three dentate men and women with no history of stroke or myocardial infarction were enrolled in the study. The investigators collected 4533 subgingival plaque samples (average of seven samples per participant). These were quantitatively assessed for 11 periodontal bacteria using DNA-DNA checkerboard hybridization. Cardiovascular risk factor measurements were obtained. Blood pressure and hypertension (SBP >/=140 mmHg, DBP >/=90 mmHg or taking antihypertensive medication, or self-reported history) were each regressed on the level of bacteria: considered causative of periodontal disease (etiologic bacterial burden); associated with periodontal disease (putative bacterial burden); and associated with periodontal health (health-associated bacterial burden). All analyses were adjusted for age, race/ethnicity, sex, education, BMI, smoking, diabetes, low-density lipoprotein and high-density lipoprotein cholesterol.

Etiologic bacterial burden was positively associated with both blood pressure and prevalent hypertension. Comparing the highest and lowest tertiles of etiologic bacterial burden, SBP was 9 mmHg higher, DBP was 5 mmHg higher. *The authors concluded that their data provide evidence of a direct relationship between the levels of subgingival periodontal bacteria and both systolic and diastolic blood pressure as well as hypertension prevalence.*

## Immediate Implant Placement and Restoration in the Esthetic Zone

Tortamano P, Camargo L, et al.
*Int J Oral Maxillofac Implants. 2010 Mar-Apr;25(2):345-50*

The purpose of this clinical study was to assess the dimensional stability of peri-implant soft tissues around immediately placed and restored implants in the maxillary esthetic zone. Twelve systemically healthy patients presenting with a hopeless maxillary central incisor were selected. Provisional restorations were delivered immediately after tooth extraction and implant placement. Periimplant soft tissue dimensions were measured either by direct clinical examination or evaluation of study casts. Measurements were performed before extraction; immediately after implant and restoration


***continued on back page***

## Immediate Implant...*continued*

placement; and 6 weeks, 3 months, 6 months, 12 months, and 18 months postoperatively. The distances assessed were: tip of the mesial papilla to the mesioincisal edge of the adjacent central incisor, tip of the distal papilla to the mesioincisal edge of the adjacent lateral incisor, and the length of the clinical crown of the definitive restoration.

All patients completed the study, and no implants failed within the 18-month follow-up period (100% survival rate). No statistical differences were observed in the distances between the incisal edge of the adjacent teeth and the mesial and distal papilla tips at any follow-up appointment. Likewise, there were no alterations in the definitive clinical crown dimensions during the follow-up period. *The findings of this 18-month study indicate that, within the selection criteria and technique presented, immediate implants with immediate restorations can be a predictable option for the replacement of teeth in the esthetic zone, providing stability to the peri-implant soft tissue.*

## Association of Periodontal Disease and Impaired Fasting Glucose

Zadik Y, Bechor R, et al.
*Br Dent J. 2010 Mar 26*

The purpose of this study was to determine whether there is an association between fasting plasma glucose level and periodontal condition in a non-diabetic male population. Data of periodic medical examinations of 815 non-diabetic male adults (mean age 38.1 +/- 7.0 years) were analyzed. Blood samples were drawn from each subject following a 14-hour fast. The distance between the cement-enamel-junction to alveolar bone crest was measured at inter-proximal sites on two standardized posterior bitewing radiographs.

Higher prevalence of alveolar bone loss was found among individuals with a fasting glucose level of >/=100 mg/dL than among individuals with <100 mg/dL and among individuals with BMI >/=25 than among individuals with BMI <25. Associations were found between bone loss prevalence and serum triglyceride levels of >/= 200mg/dL, total cholesterol level of >/= 200mg/dL and LDL-cholesterol level of >/=130mg/dL. *The authors concluded from the results of their study that in the non-diabetic adult population, periodontal disease was associated with impaired glucose level. Periodontal disease could serve as a predictor for future diabetes mellitus, or play a possible role in the glucose imbalance and diabetes mellitus development.*

## History of Treated Periodontitis and Smoking as Risks for Implant Therapy

Heitz-Mayfield LJ, Huynh-Ba G. et al.
*Int J Oral Maxillofac Implants. 2009;24:39-68.*

The purpose of this review was to evaluate a history of treated periodontitis and smoking, both alone and combined, as risk factors for adverse dental implant outcomes. A literature search of MEDLINE (Ovid) and EMBASE from January 1, 1966, to June 30, 2008, was performed, and the outcome variables implant survival, implant success, occurrence of peri-implantitis and marginal bone loss were evaluated.

Considerable heterogeneity in study design was found, and few studies accounted for confounding variables. For patients with a history of treated periodontitis, the majority of studies reported implant survival rates > 90%. Three cohort studies showed a higher risk of peri-implantitis in patients with a history of treated periodontitis compared with those without a history of periodontitis. In three of four systematic reviews, smoking was found to be a significant risk for adverse implant outcome. While the majority of studies reported implant survival rates ranging from 80% to 96% in smokers, most studies found statistically significantly lower survival rates than for nonsmokers. *The authors conclude that there is an increased risk of peri-implantitis in smokers compared with nonsmokers. The combination of a history of treated periodontitis and smoking increases the risk of implant failure and peri-implant bone loss.*