Dear Colleague:

I hope everyone is having a wonderful summer. I’d like to take this opportunity to welcome two new additions to our team, Johanna Morgan and Nina Carroll. Johanna comes to us with nearly 10 years experience as a practicing Dental Hygienist and is excited to continue her career with us. Nina, a native of Maryland, is enthusiastic to work as one of our receptionists. They both look forward to working with all of you and contributing in any way they can to making your patients’ experience with us seamless.

I’d like to thank all of you for your continued trust and confidence in our office. We enjoy all the interactions with your patients and most of all with you. Thank You!

Warm Regards-
Dr. Diamond

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.

Factors Influencing Ridge Alterations Following Immediate Implant Placement into Extraction Sockets
Ferrus J, Cecchinato D, et al.

The purpose of this study was to identify factors that may influence ridge alterations occurring at the buccal aspect of the extraction site following immediate implant placement. In 93 subjects, single-tooth implants were placed immediately into extraction sockets in the maxilla (tooth locations 15-25). A series of measurements describing the extraction site were made immediately after implant installation and at re-entry, 16 weeks later. The implant sites were stratified according to four factors: (i) implant location (anterior/posterior), (ii) cause of tooth extraction (periodontitis/non-
Ridge Alterations...continued

periodontitis), (iii) thickness of the buccal bone walls (< or = 1 or > 1 mm) and (iv) the dimension of the horizontal buccal gap (< or = 1 or > 1 mm).

Results showed that (i) the location where the implant was placed (anterior/posterior) as well as (ii) the thickness of the buccal bone crest and (iii) the size of the horizontal buccal gap significantly influenced the amount of hard tissue alteration that occurred during a 4-month period of healing. At implant sites in the premolar segment, the fill of the horizontal gap was more pronounced than in the incisor-canine segment, while the vertical crest reduction was significantly smaller. Furthermore, at sites where the buccal bone wall was thick (>1 mm) and where the horizontal gap was large (>1 mm), the degree of gap fill was substantial. The authors concluded that the thickness of the buccal bone wall as well as the dimension of the horizontal gap influenced the hard tissue alterations that occurred following immediate implant placement into extraction sockets.

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.

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.

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