Central Park Periodontics, P.C.

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Dear Colleague:

We are pleased to introduce you to Central Park Periodontics. We are dedicated to providing optimum care and enhancing treatment outcomes for your patients while reducing risk by employing the latest technologies, treatments, and relevant clinical information. To this end, we know of no better way to open communications than by sharing germane studies in a brief, concise newsletter.

There is no shortage of how we, at Central Park Periodontics, strive to share our knowledge and clinical skills with our fellow colleagues. If there's a topic you wish to learn more about, drop us a line or email a request. We want this to be as much your newsletter as ours. And in the coming months, we will reach out to you through other forms of media to fortify our message: we care about you and your patients; your peace of mind is our main goal.

Regards,

Alan, Sam, Navid, and Julia

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.*

Prevention of Mandibular Third Molar Extraction-associated Periodontal Defects

Sammartino G, Tia M, Bucci T, et al.
J Periodontol. 2009 Mar;80(3):389-96.

Extraction of deep-impacted mandibular third molars may lead to periodontal defects at the distal surface of the adjacent second molar. The purpose of this study was to compare the ability of three regenerative approaches to prevent third molar extraction-related periodontal defects. Forty-five patients with bilateral osseous or soft tissue-impacted lower third molars were selected to participate in the study. Inclusion criteria were the presence of a pocket that was located distally to the mandibular second molar with a probing depth (PD) >or=7 mm and with a probing clinical attachment level (CAL) >or=6 mm. Ninety third molar impactions were used and

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Third Molar ...*continued*

were randomly assigned to three equal treatment groups (30 each): bovine porous bone mineral (BPBM) alone, BPBM plus collagen membrane (CM), and an untreated control group. Clinical and radiographic measurements were recorded at 3, 6, 9, 12, 18, 24, 36, 48, 60, and 72 months after the surgery.

BPBM or BPBM + CM resulted in a significant reduction in PD and gain in CAL compared to the control group at all time points. BPBM + CM had the best outcome for the prevention of a second-molar periodontal defect. *The authors concluded that the application of BPBM, with or without a collagen membrane, can be a viable and stable treatment to alleviate the periodontal defects that are often associated with impacted mandibular third molar extractions.*

Periodontitis: An Archetypical Biofilm Disease

Schaudinn C, Gorur A, et al.
J Am Dent Assoc. 2009 Aug;140(8):978-86

Periodontitis is a classic example of biofilm-mediated diseases. The authors reviewed selected publications in English-language peer-reviewed journals with respect to microbial biofilms, focusing on representative works that provided a historical to a contemporary perspective on periodontal oral biofilms in the larger context of biofilm microbiology. Developments in advanced microscopy and molecular microbiology have allowed scientists to examine and characterize microbial biofilm-mediated diseases, such as periodontitis, more accurately than in the past.

The authors conclude that periodontitis, like other biofilm infections, is refractory to antibiotic agents and host defenses because the causative microbes live in complex communities that persist despite challenges that range from targeted antibiotic agents to phagocytosis. *The regular delivery of nontargeted antibiofilm agents may be an effective strategy for treating biofilms, especially if these agents include oxidative agents that dissolve the biofilm matrix.*

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 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.*

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