Dear Colleague:

Each year we continue to see growth and development in our practice accompanied by an increase in treatment success. Through this quarterly newsletter, we wish to share with you some of the latest developments in oral surgery and implant dentistry, as well as open communication with your office.

If we can provide any additional information, or if you would like to see an article on a particular topic in our next issue, please do not hesitate to call. We appreciate the trust you place in us by allowing us to participate in the care of your patients.

Regards,

Dr. Steven D. Sherry
Dr. John D. Wallace

Clinical Evaluation of Short and Wide-diameter Implants Immediately Placed into Extraction Sockets of Posterior Areas

Jiansheng H, Dongying X, et al.
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The purpose of this study was to determine the short-term success rate of the short and wide single-tooth implant, immediately placed into extraction sockets of the posterior area. In this retrospective cohort study a total of 145 subjects received 162 short and wide-diameter single-tooth implants between 2006 and 2009. A minimal 7-mm residual height and 9-mm ridge width was available in all the implant sites, and the attached gingivae were at least 2 mm wide. All implants were placed and restored with the single crown by one experienced clinician. The data were analyzed with using appropriate statistical analysis.

All implants were placed in molar areas. There were twenty Ankylos implants, with a diameter 5.5 or 7 mm and a length of 8mm, and 142 hydroxyapatite (HA)-coated implants, with a
Clinical Evaluation ...continued

diameter 5 or 6 mm and a length of 5.7 to 8 mm. One of the 162 implants failed before prosthetic restoration, resulting in survival rate of 99.4% after loading. Patients were followed for up to 56 months (mean = 24 months) after loading of implants. The radiographic and clinical data revealed well-maintained hard and soft tissues with acceptable short-term results. The investigators concluded from the results of this study that the immediate placement of short and wide-diameter implants in fresh extraction sockets may offer a simple and predictable treatment alternative if implants are positioned appropriately, following thorough preoperative analysis.

Do Angulated Implants Increase the Amount of Bone Loss Around Implants in the Anterior Maxilla?

The purpose of this study was to evaluate the relation between angulated implants and the bone loss around implants in the anterior maxilla. The subjects studied had a missing tooth in the anterior maxilla and a bone deficiency that required restoration with an angulated dental implant. After mounting the casts on the articulator, the amount of direction was measured with a facebow by calculating the difference between the mean buccopalatal angulation of the 2 adjacent natural teeth and the buccopalatal angulation of the implant abutment to the occlusal plane. Radiography was performed in each patient immediately after loading and repeated a minimum of 36 months after loading.

Fifty-eight subjects who received delayed-loading angulated implants were studied. The results showed that the mean implant angulation was 15.2° and the mean bone resorption was 0.87 mm. Analysis of the data showed a significant correlation between implant follow-up time and bone loss. No correlation was seen between the implant angulation and bone loss. An assessment of predictive factors showed a significant correlation between implant type and bone loss. The authors concluded that the angulation of implants was not associated with an increased risk for bone loss, and angulated implants may be a satisfactory alternative to vertical implants to avoid grafting procedures. The type of implant may be an important factor that affects bone resorption, although follow-up time was the strongest predictive factor.

Does Grafting of Third Molar Extraction Sockets Enhance Periodontal Measures in 30- to 35-Year-old Patients?
Hassan KS, et al.

This study was designed to evaluate the use of xenograft plus a membrane as grafting material for periodontal osseous defects distal to the mandibular second molar compared with nongrafted extraction sites after removal of impacted mandibular third molars. The authors performed a single-blind, randomized, controlled clinical trial, and the sample comprised of subjects at high risk for the development of periodontal osseous defects distal to the second molar after third molar extraction (aged 30-35 years), pre-existing osseous defects distal to the second molar, and horizontal third molar impaction. The predictor variable was the treatment status of the second molar osseous defects. The third molar extraction sites were grafted with an anorganic xenograft plus a membrane. The other sites received a full-thickness flap and extraction of the third molar without placement of the grafting materials. The outcome variables were the change in gingival index, pocket probing depth, and clinical attachment level on the distobuccal aspect of the second molar preoperatively and at 3, 6, 9, and 12 months after surgery. Data were analyzed using appropriate statistical analysis. The study was composed of 28 sites that were selected by use of a split-mouth design for each patient, and this was randomly determined through randomization.

Twelve months after third molar removal, there was a statistically significant gain in the clinical attachment level and a reduction in the probing pocket depth in the grafted sites compared with the nongrafted sites. Moreover, there was a significant difference in the alveolar bone height during the monitoring periods for the grafted sites compared with the nongrafted sites. Grafting of osseous defects distal to mandibular second molars with an anorganic xenograft plus a membrane predictably resulted in a significant reduction in the probing pocket depth, clinical attachment level gain, and bone fill, which suggests that grafting the extraction sites with an anorganic xenograft plus a membrane could prevent periodontal disease in the future.