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The effect of inter-implant distance on the height of inter-implant bone crest

The Nanuet Implant Study Group held its very successful inaugural session on November 12, 2009. The major focus of the discussion was in regard to implants in the aesthetic zone.

Once an implant is uncovered, there is approximately 1.5-2.0 mm bone loss apical to the junction of the implant and abutment. There is also a lateral dimension to the bone loss. This is approximately 1.3-1.4 mm (a little more on the distal). It should be noted that the crestal bone loss for implants with a greater than 3 mm distance between them was approximately 0.45 mm, while the implants that had a distance of 3 mm or less between them had a crestal bone

loss of 1.04 mm. "The clinical significance of this phenome-

Clinicians should proceed with great caution when placing two implants adjacent to each other in the aesthetic zone.

non is that the increased bone loss would result in an increase in the distance of the base of the contact point of the adjacent crowns and the crest of the bone. This could determine whether the papilla was present or absent between 2 implants as has previously been reported between 2 teeth. Selective utilization of implants with a smaller diameter at the implant-abutment interface may be between them at the implant-abutment

level." [J Periodontol.2000 Apr;71(4):546-9.]

It is important to maintain the inter-dental papilla between teeth, especially in the

aesthetic zone between 2 adjacent implants. As we know, the contact point can be established at any distance between the gingival margin as per the restorative dentist's specifications. "In this study the height of the soft tissue to the crest of the bone was measured between two adjacent implants

continued on reverse

Dental Fun Fact

DID YOU KNOW THAT...

St. Apollonia is the patron saint of dentistry. Apollonia, a highly respected Christian deaconess in third century Alexandria, Egypt, was dragged into the streets and tortured by a heathen mob. After they knocked out her teeth-some versions say with pincers, some say with hammer and chisel-the rioters built a fire at the city gates and threatened to burn her alive if she would not renounce her faith. Apollonia expressed her refusal by leaping into the flames.

-Georgetown University

News You Can Use

A new study on the surface chemistry of silver-colored, mercury-based dental fillings suggests that the surface forms of mercury may be less toxic than previously thought. It appears online in ACS' journal *Chemical Research in Toxicology*.

In the study, Graham George and colleagues note that mercury-based fillings, also called amalgams, have been used by dentists to repair teeth for well over a century. In recent decades their use has become controversial because of concerns about exposure to potentially toxic mercury. However, mercury can potentially exist in several different chemical forms, each with a different toxicity. Prior to this report, little was known about how the chemical forms of mercury in dental amalgam might change over time.

Using a special X-ray tech-

nique, the scientists analyzed the surface of freshly prepared metal fillings and compared these with the surface of aged fillings (about 20 years old) from a dental clinic. Fresh fillings contained metallic mercury, which can be toxic. Aged fillings, however, typically contain a form of mercury, called beta-mercuric sulfide or metacinnabar, which is unlikely to be toxic in the body. The scientists found that the surfaces of metal fillings seem to lose up to 95 percent of their mercury over time. Loss of potentially toxic mercury from amalgam may be due to evaporation, exposure to some kinds of dental hygiene products, exposure to certain foods, or other factors. The scientists caution that "human exposure to mercury lost from fillings is still of concern."

"The Chemical Forms of Mercury in Aged and Fresh Dental Amalgam Surfaces" ACS

Inter-implant distance

independent to the location of the contact point. The purpose of this study was to determine the range and average height of tissue between two adjacent implants." The results of this study showed that "The mean height of papillary tissue between 2 adjacent implants was 3.4 mm, with a range of 1 mm to 7 mm. Conclusions: Clinicians should proceed with great

caution when placing two implants adjacent to each other in the aesthetic zone. In most cases, only 2, 3, or 4 mm of soft tissue height (average 3.4 mm) can be expected to form over the inter-implant crest of bone. These results showed that the modification of treatment plans may be necessary when aesthetics are critical for

success." [J. Periodontal 2003;74 1 785-1788.]

The question arose as to whether it is possible to minimize the marginal bone loss around implants in order to maintain their stability. It is generally agreed that this bone loss is associated with a micro gap or movement at the implant abutment junction which results in inflammation which destroys the bone. The biologic width, a constant consisting of 1 mm of connective tissue, 1 mm of attached gingival,

and 1 mm of sulcus has been observed in natural teeth and implants. The inflammation of the microgap disrupts the biologic width. If you can move the inflammatory infiltrate laterally (platform switching), you can minimize the crestal bone loss. "Minimizing marginal bone loss may help insure implant stability, preserve soft tissue, and maintain aesthetic gingival contours." Int J Periodontics Restorative Dent. 2008; 28:347-355.

Dr. Brian Simpson announces the second meeting of the NANUET IMPLANT STUDY GROUP

**Speaker: John Ruel D.M.D., M.S.C.D Prosthodontist
NEW TECHNOLOGY IN IMPLANT DENTISTRY**

Tuesday, March 30, 2010

**Dinner: 6:30 Presentation: 7:00 — 9:00 pm
Mulberry Grill 149 Main St, Nanuet, NY 10954**

**2 CE credits awarded by the Ninth District Dental Association
Cost: \$30.00**

**Please bring your cases and documentation
(photos, x-rays, models) for discussion.**

**To register, contact Theresa: 845-623-3497
or email her at theresag@drbriansimpson.com**

" Never be afraid to try something new. Remember amateurs built the ark. Professionals built the Titanic." -unknown