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**P**roper implant maintenance is an important procedure. Last month, Kimberly J. Nimmons, RDH, discussed ways to maintain implants such as in-office hygiene care, probing, radiographs, locally applied chemotherapeutics, and intraoral exams. This month she focuses on scaling, polishing, at-home care, interproximal cleaning, brushing, and using intraoral cameras for proper implant maintenance.

### Proper Implant Maintenance Scaling

Removal of calculus and plaque, if present, is indicated for implants at a hygiene visit. There are many dental instruments available for scaling deposits from implants. Typically it is the implant abutment that will actually be instrumented.

# The Expanding Esthetic Practice: Implant Maintenance—Part 2

Titanium implant abutments are easily marred or scratched with a traditional metal hand instrument. A roughened surface would make the titanium more susceptible to bacterial plaque, calculus buildup, and the increased possibility of peri-implant inflammation. There are several manufacturers of implant scalers and curettes (Implacare, Hu-Friedy Manufacturing Company, Inc) (Figure 1). These



**Figure 1**—Removal of calculus and plaque should be performed with an instrument specifically designed for safe use around implants.

hand instruments are specifically designed for around implants and are typically made of plastic, graphite or nylon. Specialty implant instruments are gentle but effective in removal of accumulations around an implant.

Controversy exists concerning the use of sonic or ultrasonic instruments around implants. It would be

advisable to use power scalers with extreme caution to prevent damage to the implant surface as well as to the peri-mucosal seal. However, some manufacturers offer a plastic cover that is placed over the tip of the metal sonic or ultrasonic instruments to be used around implants. Calculus that forms around implants tends to be softer than calculus adhering to a natural tooth and is mostly supragingival. In the rare



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### Polishing

Rarely, if ever, will a hygienist attempt to restore a polished surface to an implant. The titanium surface of an implant abutment is highly polished and with proper care should not lose its manufacturer's polished finish. Therefore "polishing" in the traditional sense does not apply to implants. The indication for polishing an implant is for plaque removal. The implant components may be cleaned with a traditional round soft rubber cup and a nonabrasive paste such as Rembrandt (Oral-B) or Prodentx NSF fluoride gel (Pro-Dentec [Professional Dental Technologies, Inc]). Rota-dent (Pro-Dentec [Professional Dental Technologies, Inc]) brush tips and mandrels, designed for use with a slow-speed handpiece (Figure 2), will achieve gentle and effective removal of plaque around implants. If no polishing agent is desired, the hygienist can simply use an antibacterial liquid such as chlorhexidine, Listerine (Pfizer, Inc) or Biotene (Laclede, Inc). Rubber cup or brush polishing of implants, when indicated, must be accomplished with little or no abrasion to the titanium surface.

Air polishing of implant components remains a very controversial subject. Where as there is sufficient research to support the safe and effective use of air polishing for implants, there is also a real possibility of pitting the titanium surface from too aggressive use of the air-polishing technique. There are currently 2 new lower, abrasive air-polishing products—Prophy



## In Practice

Pearls (Kavo America Corporation) and Jet Fresh (Dentsply Professional). Both have round smooth edge particles that are less likely to cause pitting or scratching. Clinical research contraindicates the use of air polishing around porcelain or composite restorative materials. Therefore, air polishing around esthetically restored implants is not recommended, as damage to the porcelain or composite materials could result. It is best left to each



Figure 2—Rota-dent brush tips and mandrels for in-office implant care.

individual operator to determine if and when it is safe to use air polishing for maintenance of implants.



Figure 3—Interproximal brushes are available in different sizes and styles.

### At-Home Care

Daily oral care by the patient is critically important to the long-term success of the implant and its restoration. Patient instruction should include detailed verbal guidance, visual demonstration, and hands-on experience. As with all oral hygiene instruction, the techniques and products patients are using should be re-evaluated during every hygiene visit. Constructive improvements should be taught and techniques that are working well should be praised. Patients need to know they are largely responsible for the health of their implants and surrounding tissues.



Figure 4—Hydro Floss is proven to be effective and safe for plaque removal around implants.

brushes should also be chosen based on the area where they will be used. Larger spaces may be best cleaned with a proxy brush such as StaiNo Interdental Brushes (StainNo, LLC) (Figure 3) or smaller interdental brushes, such as the sulca brush or Go-Betweens Cleaners (Sunstar Butler) are also helpful in narrower interproximal spaces.

Water irrigation units such as the Hydro Floss (Hydro Floss, Inc) (Figure 4) are also beneficial in implant maintenance. Proper instruc-

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### Interproximal/Circumferential Cleaning

There are many flosses, interproximal cleaners, and water irrigation systems commercially available and safe for use around implants. Floss choice should be based on the clinical indication. A single tooth implant with intimate tissue adaptation may be best cleaned with floss such as Glide (WL Gore) or Satin Floss (Oral-B). Traditional flossing of the mesial and distal surfaces is required, but it is often indicated to use the floss on the facial/lingual surfaces as well. A technique of looping the floss and then cleaning has to be taught to the patient. Woven flosses such as Thornton's Bridge and Implant Cleaners (Thornton International, Inc) or Gum Expanding Floss (Sunstar Butler) are indicated where there are large interproximal spaces or long expanses of a bar-retained prosthesis. Interproximal

tion with water irrigation units is imperative. The water stream must be directed interproximally and horizontally between implants so the patient does not inadvertently damage the peri-implant seal with improper positioning. Interproximal and circumferential cleaning of implants is recommended on a daily basis.

### Brushing

Twice daily cleaning of implants with a soft toothbrush is recommended. Brushing to remove bacterial plaque accumulations should be accomplished using a soft traditional toothbrush such as Nimbus Microfine (Nimbus Dental) (Figure 5) or a very gentle power brush. While there are many traditional and mechanical brushes available for over-the-counter purchase, the professionally dispensed Rota-dent with its patented microfilaments is perhaps the gentlest and most effective tool for daily cleaning around



**Figure 5**—Brushing to remove bacterial plaque accumulations should be accomplished using a soft traditional toothbrush.



**Figure 6**—The Rota-dent One-Step is an excellent choice for daily implant care.



**Figure 7**—The Miharu home-use intraoral camera is a novel way to encourage patient compliance with home care.

for implant-supported esthetic restorations. As with other esthetic restorative dentistry, the well-informed hygienist and patient will be able to maximize the beauty and lifespan of their esthetic implant restored teeth. ■

implants and implant restorations. The Rota-dent's dense brush head does a superior job removing bacterial plaque (Figure 6). The Rota-dent is ideal given that it is very gentle to the tissues, as well as non-abrasive to the abutment.

#### **Intraoral Camera**

Patients need to be shown how healthy peri-implant tissue should look. The intraoral camera is very helpful in this instance. A common problem associated with implants is a piece of food or shred of floss lodged in the peri-implant space. Patients are less aware of this than when there is a similar object lodged under the gum around a natural tooth. Therefore, careful daily tissue (gum) observation by the patient should be a part of their routine oral home care.

One of the newest home care aids available to patients is the Miharu home-use intraoral camera (RF System Lab) (Figure 7). The camera easily connects to a patient's television for periodic tissue checks or to check the effectiveness of their oral care routine.

Patients should report any tenderness, redness, swelling or other symptoms around the implant as soon as possible to their dentist or hygienist. Early preventive steps can be taken to avoid a severe infection, which could be the difference between failure or success of an implant.

#### **Conclusion**

As implants continue to become a desirable and routine choice for esthetic restorative dentistry, the hygienist will increasingly be caring