or cause a galvanic reaction at the implant-abutment interface\textsuperscript{48}.

Ideally, hand periodontal scalers for cleaning dental implants can be plastic, Teflon, gold-plated, or made of wood (Figs. 5 and 6\textsuperscript{,9}). When using gold-plated curettes, the manufacturer recommends not sharpening these hygiene instruments, as the gold surface could be chipped exposing the hard metal underneath this coating. Stainless steel scaling instruments may abrade the implant surface, stripping off any surface treatment such as hydroxyapatite (HA) as the instruments hardness is greater than the titanium alloy the implant is fabricated from. (Fig. 7)

Other cleaning armamentarium contraindicated for use with dental implants are air powder abrasive units, flour or pumice for polishing, and sonic and ultrasonic scaling units\textsuperscript{49}. Ultrasonic, piezo or sonic scaler tips may mar the implants surface leading to microroughness and plaque accumulation. The stainless steel tip may also lead to gouging of the implants polished collar. (Fig. 8) However, some clinicians advocate using a sonic instrument with a plastic sleeve over the tip for scaling dental implants. Air powder polishing units may also damage the implant surface and should be avoided during hygiene appointments. (Fig. 9) Even the use of baking soda powder in these units may strip off any surface coating on the implant. Additionally, the air pressure may detach the soft tissue connection with the coronal of the implant leading to emphysema.

Titanium or titanium alloy surfaces of dental implants can be polished using a rubber cup along with a nonabrasive polishing paste or a gauze strip with tin oxide. Not only is the hygiene armamentarium important, but so are the home care techniques used to maintain endosseous dental implants. Patients should be taught the modified Bass technique of brushing using a medium-sized head, soft-bristled toothbrush. The use of intradental brushes should be used by implant patients after being shown their proper use. The plastic-coated wire brush is the only type to be used with dental implants to clean and not scratch the implant surface (Fig. 10).

Recently, automated mechanical toothbrushes have been advocated as a daily mode of tooth cleansing. These devices may be a rotary, circular, or sonic type. With these home care instruments, the key to their effectiveness is proper instruction on their use and then diligent daily use by the implant patient.

As with natural dentition, adjunctive cleaning aids such as flossing are still valuable. As with dentate patients, an implant patient’s home care requirements should be individually tailored according to each patient’s needs. Individual needs are based on the location and angulation of the dental implants, the position and length of transmucosal abutments, the type of prosthesis, and the dexterity of each patient.

The other popularized type of cleaning device is the use of oral irrigators with or without the addition of antimicrobial solutions. Also, oral rinses with antimicrobial properties such as Listerine or chlorhexidine have been widely advocated throughout the literature\textsuperscript{3-35}.

Summary

During the infancy years of dental implantology, the emphasis for long-term success of osseointegrated implants was the surgical phase of dental implantology. In the years that followed, the emphasis for success had switched from a purely surgical influence to focusing more on the proper fixture placement which would be dictated by the prosthetic and aesthetic needs of each particular case.

In more recent years, the dental professional has recognized professional implant maintenance and diligent patient home care as two critical factors for the long-term success of dental implants. The microbiota and clinical presentation of peri-implantitis is the same as periodontitis around a natural tooth. \textsuperscript{7}

A complete list of references is available from the publisher.