Clinically relevant and appropriately sized tips help improve implant maintenance

By LM-Dental Staff

The clinical challenge: Instruments (tips) intended and used for implant maintenance are too bulky, especially in cases when patients have healthy, tight tissue around the implants.

Proposed solution: ErgoMix Mini Implant Instruments from LM-Dental.

Reasoning supporting the solution: According to LM-Dental, dental practitioners were frustrated with the tip sizes of implant hand-instruments. They approached LM with their frustration and shared improvement suggestions. In response, LM, a market-leading instrument manufacturer in Europe, known for being sensitive to practitioners’ needs and passionate about clinical relevance, designed a series of titanium implant instruments with mini-sized tips. These LM ErgoMix implant instruments are made of softer-than-standard titanium alloy that is gentle on implants yet effective for calculus removal. ErgoMix implant instruments also feature replaceable tips and large diameter (12 mm) silicone surfaced handles that, according to the company, improve comfort. The ErgoMix replaceable tip mechanism is engineered so that no tools are needed to change the tips. That means there is no wrench tool to lose—guaranteed. The tips line up perfectly to the handles, making ErgoMix technology the 21st-century version of the outdated cone-socket system, according to the company.

The implant series includes four instrument patterns: Mini Gracey 1/2 – anterior (gray); Mini Gracey 11/12 – mesial (orange); Mini Gracey 13/14 – distal (blue); and Mini Universal – universal, all surfaces (red). They are available as a kit, containing one of each instrument and a cassette, or they may be purchased individually.

Big praise for small implant attachment

Italian company Rhein’83 is a leader in production of castable attachments with elastic retention and implant components. In 2012, its new implant attachment, OT EQUATOR, was rated 4.7 by Dental Product Shopper. In December 2014, Rhein was spotlighted at the Greater New York Academy of Prosthodontics event, where Drs. Adawi, Flinton and Di Pede presented a poster, entitled “Conservative approach to management of a partial edentulism in a medically compromised patient,” using the OT EQUATOR because of its functionality and reduced dimensions compared with other attachments. On Dec. 8, Rhein’83 Vice President Technology Gianni Storni lectured at New York University on removable prosthesis applications.

This year, many activities will be organized, including presentations on the latest technical innovations at the Chicago Midwinter Meeting, Feb. 26–28. On Thursday, Feb. 26, Rhein’83 USA will be at the Cal-Lab 89th Annual Meeting (oldest laboratory organization, founded in 1926). On Friday, Feb. 27, and Saturday, Feb. 28, Rhein will be at Lab Day at the Hyatt Regency, Chicago. Storni and Rhein’83 USA owner Joe Tambasco will be at the Rhein booth to present the latest innovations designed in Rhein research and development laboratories. For more information, you can visit www.rhein83usa.com, email info@rhein83usa.it, or phone (877) 778-8383.

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Edentulous arch restored with BruxZir Full-Arch Implant Prosthesis

By Michael McCracken, DDS, PhD, and Jonathan P. Ouellette, DMD

Fixed hybrid dentures have been used to successfully restore fully edentulous patients for decades. Their durability, however, leaves room for improvement. There are three issues that can complicate the long-term success of the traditional fixed hybrid denture: The acrylic teeth tend to wear; the teeth can fracture or dislodge from the acrylic base; and the acrylic base itself can fracture. The BruxZir® Full-Arch Implant Prosthesis (Glidewell Laboratories, Newport Beach, Calif.) eliminates these issues, providing a restoration that is more durable in the long term, while sacrificing nothing when it comes to esthetics.

Milled from a single block of BruxZir Solid Zirconia — an exceptionally fracture-resistant material that exhibits flexural strength up to 1465 MPa — this fixed prosthesis utilizes advanced staining and glazing techniques, coloring the prosthetic teeth to closely mimic natural dentition and the gingival areas to match the shade of the patient’s soft tissue.

Case report

The patient is a 58-year-old male with no contraindications for implant treatment. The patient had a total of 11 BioHorizons® Internal Hex implants (BioHorizons; Birmingham, Ala.) placed, including six in the maxilla and five in the mandible (Figs. 1a, b). The implants integrated for more than six months, and the patient presented for restoration of his edentulous arches.

Preliminary impressions of the implants were made. Healing abutments were removed, then closed-tray impression copings were seated. The impressions were made in stock plastic trays, and the copings were placed back into the impressions before the case was sent to the laboratory.

The laboratory poured casts from the initial impressions and fabricated bite blocks and occlusal rims for the centric jaw relationship (CJR) records. Each bite block contains two screw-retained temporary cylinders that allow the wax rims to be screwed down, producing a very accurate CJR. The contoured rims were returned to the laboratory with the initial casts.

Upon receiving the wax rims and jaw relation records, the laboratory and dentist decided that the patient required four multi-unit abutments in the anterior maxilla to ensure that the screw access openings were within the confines of the planned prosthesis, so at the next appointment, the patient’s healing abutments were removed, and the multi-unit abutments were transferred to the patient’s mouth and torqued into place.

Later, wax setups were tried in and evaluated for proper esthetics, phonetics, contours, occlusion and tooth arrangement.

The implant verification jig (IVJ), which precisely captures the depth and angulation of the implants in the final impression, was seated and tightened into place. After bonding the individual sections of the IVJ together, a final impression was made using an open-tray impression technique and the custom tray provided by the lab.

The lab produced a fixed provisional appliance using precise CAD/CAM technology and effectively preserved the doctor-approved setup. The provisional implant prosthesis enabled the patient to evaluate the proposed restoration for esthetics and function for a few-week trial period (Fig. 1). The final restoration was fabricated using the CAD design that was confirmed during the provisional trial period.

The final prostheses were delivered without complication, exhibiting excellent fit, occlusion and esthetics (Fig. 3). The patient was exceptionally pleased with the function offered by this fixed restoration, which he should be able to enjoy for a great number of years given the extraordinary durability of BruxZir Solid Zirconia.

Photos/Provided by Glidewell Laboratories