A dental isolation technique that is unlike anything else

By Isolite Systems Staff

Dental isolation is one of the most common and ongoing challenges in dentistry. The mouth is a difficult environment in which to work. It is wet and dark, the tongue is in the way, and there is the added humidity of breath, which all make dentistry more difficult.

Proper dental isolation and moisture control are two often overlooked factors that can affect the longevity of dental work — especially with today’s advanced techniques and materials.

Leading dental isolation methods have long been the rubber dam — or manual suction and retraction with the aid of cotton rolls and dry angles. Both of these methods are time and labor intensive, and not particularly pleasant for the patient.

Enter Isolite Systems. Its dental isolation systems deliver an isolated, humidity- and moisture-free working field as dry as the rubber dam but with significant advantages, including better visibility, greater access, improved patient safety and a leap forward in comfort. Plus, it allows dentists to work in two quadrants at a time.

The key to the technology is the “Isolation Mouthpiece.” Compatible with Isolite’s full line of products, the mouthpiece is the heart of the system. It is specifically designed and engineered around the anatomy and morphology of the mouth to accommodate every patient, from children to the elderly.

The single-use Isolation Mouthpieces are now available in six sizes and position in seconds to provide complete, comfortable tongue and cheek retraction while also shielding the airway to prevent inadvertent foreign body aspiration.

Constructed out of a polymeric material that is softer than gingival tissue, the mouthpieces provide significant safety advantages, and their ease-of-use can boost your practice’s efficiency, results and patient satisfaction.

Isolite Systems provides three state-of-the-art product solutions for every practice, every operatory: Isolite, illuminated dental isolation system; Isodry, a non-illuminated dental isolation; and the new Isovac, dental isolation adapter.

Using the Isolation Mouthpieces, all three dental isolation products isolate upper and lower quadrants simultaneously while providing continuous hands-free suction. This allows a positive experience where the patient no longer has the sensation of drowning in saliva/water during a procedure, and the practitioner can precisely control the amount of suction/humidity in the patient’s mouth.

Isolite Systems’ dental isolation is recommended for the majority of dental procedures where oral control and dental isolation in the working field is desired. It has been favorably reviewed by leading independent evaluators and is recommended for procedures where good isolation is critical to quality dental outcomes.

Visit the Isolite booth, No. 706, here at the Yankee Dental Congress, or go online to www.isolitesystem.com.
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*Price does not include shipping or applicable taxes. Inclusive is a registered trademark of Glidewell Laboratories. Hahn Tapered Implant is a trademark of Prismatic Dentalcraft, Inc. Price is valid only in the U.S.

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Freehand vs. guided surgery: Clinical considerations and case examples

By Siamak Abai, DDS, MMedSc

When treatment planning dental implant therapy, one of the biggest questions practitioners face is whether to employ freehand or guided surgery. Exploring the advantages and disadvantages of each approach via case examples can help clinicians arrive at an informed decision.

Case example No. 1: Freehand implant placement

A 54-year-old female with an existing implant in the area of tooth #30 presented with pain in the area of the implant, stock abutment and crown. Intraoral and radiographic examination revealed a significant amount of crestal bone loss and soft-tissue inflammation surrounding the implant. This was likely the result of residual excess cement. To avoid such complications, custom implant abutments or screw-retained crowns are recommended.

A treatment plan was proposed in which the patient’s existing implant would be removed, a bone augmentation procedure performed, and a new dental implant placed. Freehand surgical placement was selected for the case, as a flap would need to be reflected to visualize the implant site, and the planned implant position was a safe distance from any vital patient anatomy.

First, the implant crown was removed, revealing substantial inflammation in the peri-implant soft tissue. The implant was then removed. The socket left by the removed implant and the surrounding ridge were curetted and augmented with a xenograft material.

After four months of healing, a surgical flap was reflected and an osteotomy created. A 3.5-mm-diameter Hahn™ Tapered Implant (Glidewell Direct; Irvine, Calif.) was threaded into the implant site with relative ease, and a healing abutment was placed.

Four months later, a BruxZir® Solid Zirconia crown was designed based on the final VPS impression. The crown was delivered without complication, establishing a natural-looking emergence profile. Final radiography exhibited stable levels of crestal bone surrounding the implant (Figs. 1a, b).

The final result provided the patient with an excellent long-term prognosis (Fig. 2).

Case example No. 2: Guided surgery

A 55-year-old male presented for treatment with a missing second molar. After thorough intraoral and extraoral evaluation, guided implant surgery was proposed, and accepted by the patient, who wanted treatment to be as efficient and painless as possible. Because bone grafting was unnecessary and there was adequate keratinized tissue present, a flap would not need to be reflected, making the flapless approach facilitated by guided surgery ideal. Further, the added expense was not an obstacle for the patient.

A digital impression was taken using an intraoral scanner, which was combined with CBCT scanning data to produce the digital treatment plan. A surgical guide was fabricated that would precisely control the location of osteotomy.

At the next appointment, a tissue punch was used to access the implant site. The osteotomy was created through the surgical guide. A 5.0-mm-diameter Hahn Tapered Implant was placed.

With favorable primary stability established, a healing abutment was attached to the implant.

After three months, the patient returned for final impressions. Based on the final impression, the lab produced a screw-retained BruxZir crown. The final restoration was delivered without complication (Figs. 3a, b).

Final radiography displayed excellent crestal bone levels in the area of the Hahn Tapered Implant.
Perfectly fitting restorations with Planmeca FIT

By Planmeca Staff

The open Planmeca FIT™ system for chairside CAD/CAM provides dental clinics with a completely digital workflow. It integrates intraoral scanning, 3-D designing and chairside milling into one system, allowing clinics to treat patients in a single appointment.

Planmeca FIT offers all the necessary tools for designing perfectly fitting restorations within the first patient visit.

The Planmeca FIT system is comprised of three integrated steps—precise intraoral scanning, sophisticated 3-D designing and efficient chairside milling, according to the company. The system combines all workflow phases under one software platform, enabling access to all imaging and CAD/CAM work through the same interface.

The Planmeca PlanScan® intraoral scanner can be integrated with any digital Planmeca dental unit. It can be used just like any other instrument and easily shared between different users. The scanner can be controlled from the dental unit foot control, leaving the user’s hands free for scanning and patient treatment at all times. Live scanning data can be constantly accessed from a dental unit’s tablet device, while sound guidance further ensures optimal data capture.

The Planmeca PlanCAD® Easy design software is ideal for a wide range of prosthetics planning. It provides the perfect tools for sophisticated 3-D designing at dental clinics, according to the company, ensuring the precise placement of restorations. Completed designs can either be sent to a lab in an open STL file format or manufactured on-site with the Planmeca PlanMill® 40 milling unit. Packed with refined power, the unit produces restorations from a large selection of materials, exactly according to the design.

All steps of the Planmeca FIT workflow are easily controlled and accessed through the Planmeca Romexis® software platform. Planmeca Romexis is the brains behind the Planmeca ecosystem and assures that the Planmeca FIT system always runs seamlessly. In addition, the software provides remote real-time usage information on the Planmeca PlanMill 40 milling unit, allowing clinics to locate resources and monitor ongoing milling processes.

Planmeca FIT is a completely streamlined and integrated approach to high-quality dental care. According to the company, it helps clinics utilize their resources to the fullest and treat more patients in a shorter period of time. Instead of two appointments, patients can be treated in one visit—without requiring temporary crowns or physical dental models.
A new generation of core build-up material

By Kettenbach LP Staff

Visalys® Core, the new product from Kettenbach LP, represents the next generation of core build-up materials. The most recent addition to the Visalys family is a dual-curing core build-up material with unique active-connect-technology (ACT) to ensure a reliable bond with all common adhesives — without an additional activator.

The product was first unveiled at last year’s International Dental Show in Cologne, Germany. Visalys Core is the first core build-up material from Kettenbach. The fluoride-containing, dual-curing composite was developed for the fabrication of radiopaque core build-ups and core fillings and for cementing root posts.

The product incorporates ACT, which is unique in the market. This enables the material to bond actively with all common light-curing and dual-curing, single-step and multi-step adhesives, without an additional activator. The advantage for users is that it allows them to use the bonding agent they are used to — no matter whether it is a light-curing or dual-curing, a single- or multi-bottle system.

A firm foundation

According to the company, Visalys Core ensures easy and reliable handling with excellent positional stability. At the same time, it exhibits good flowability and low extrusion force. The compressive strength results in a stable monoblock and a secure bond.

Optional light-curing allows the procedure to be continued immediately, according to the company, and reliable self-curing provides for dependable strength even on the cavity floor and in root canals. Polishing characteristics ensure precise preparation; even without light-curing, the smear layer is minimal. The product is also free of bisphenol A and its derivatives.

Visalys Core is available in dentin and white shades in a 5-ml double syringe and in a 25-ml cartridge. For detailed information about Visalys Core, visit the Kettenbach website at www.kettenbachusa.com.

About Kettenbach LP

Kettenbach LP (Huntington Beach, Calif.) is the exclusive U.S. distributor for Kettenbach GmbH & Co. KG (Eschenburg, Germany). Founded by August Kettenbach in 1944, Kettenbach GmbH was created for the development and marketing of medical and dental products.

Today, the company is an international producer of dental impression materials and is also known in other surgical areas of medicine. Brands include Panasil VPS Impression Material, Identium VSXE Impression Material, Futar Bite Material, Silginat Alternative Alginate, Visalys Temp Material and Visalys Veneers.
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Fully autoclavable and designed to grip all shank sizes, including CA, FG and short shanks, Shofu’s BurButler is an innovative bur storage system designed to bring time- and cost-savings to a dental practice.

This universal bur block is made of resilient, medical-grade silicone, and it comes in five colors — amber orange, amethyst purple, diamond white, ruby pink and sapphire blue — for easy coding and identification. The BurButler does not require plugs or extra parts to securely hold instruments.

This unique silicone block features a patented starburst design with reverse fluting that grips all burs in place, eliminating the risk of spilled or misplaced burs, the company asserts. The holes offer drainage for proper cleaning and hold items tightly but flexibly, so no burs will ever be lost.

Intended for customized mixing and matching of burs, the 10-hole block is designed to have an ideal spacing between the holes. This facilitates easy insertion and removal of burs, and it is safe for fingers petite or large.

Each bur block is complemented by a protective lid made of clear plastic. Both the lid and base can be autoclaved together. Equipped with skirted grooves, the lid grips the base easily, and it can be removed with one hand.

The clear lid makes it possible to see the content of each bur block, allowing dental staff to organize their stations by personnel, procedure or operatory. Whether used for bur storage, sterilization or organization, Shofu believes its BurButler will help bring time and cost savings to every dental practice.

To learn more about the BurButler or other Shofu Dental products, stop by the booth, No. 1229, visit www.shofu.com or call (800) 827-4638.
OCO Biomedical, a proven world leader in innovative, patented dental implant products, technology and education, proudly presents the 2016 OCO Dental Implant Symposium. Filled with two days of information-packed lectures, the Symposium will be held on Friday, July 22nd from 8am to 5pm and Saturday, July 23rd from 8am to 4pm at the spectacular Sandia Resort and Casino in Albuquerque, New Mexico.

Participants in this exciting, third annual OCO event will receive fourteen (14) hours of AGD-Pace CE Credits and have the opportunity to network and gain knowledge from nationally recognized lecturers. Participants will learn immediate, practical, profitable skills in the most advanced methods of implantology, restorative dentistry, sinus elevation, and bone grafting.

States OCO founder/president, David D. D’Alise, DDS, “Since 1976, OCO has focused on developing, manufacturing and addressing the demanding needs of the dental industry. Our 2016 Symposium will showcase not only the latest innovations in procedures and products but our commitment to the highest standards of practice and education as well.”

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Quite frankly, the uncertainty, unpredictability and long onset time of local anesthetic equally terrifies the practitioner.

The Anutra Local Anesthetic Delivery System redefines local anesthetic delivery, according to the company. It enhances patient experience and comfort while transforming a practitioner’s efficiency and profitability essentially optimized. Because buffered anesthetic is raised to physiologic pH, the anesthetic crosses the nerve membrane more readily, meaning a patient can reach pulpal anesthesia in as little as two minutes, even with blocks.

Additionally, anywhere from 4,000 to 6,000 times the active molecules of anesthetic will cross the nerve membrane, making it more profound than normal lidocaine, as well as increasing the predictability that a patient will get numb the first time, even on those hard-to-numb patients.

Not only does the Anutra Local Anesthetic Delivery System provide a simplistic platform for you to buffer in your practice, it also introduces the first-known FDA approved, multi-dose, one-handed aspiration syringe that is fully disposable.

So what does that mean? It means you can hold up to 6 milliliters of anesthetic in one single syringe. No need to reload cartridges — one syringe can hold the equivalent of at least three traditional 1.8 mL dental cartridges.

With a cost point that is affordable, a revolutionary new syringe, a simplistic dosing system and a long shelf life, the Anutra Local Anesthetic is a no-brainer for every dental practice, according to the company.
NEW! Visalys® Core —
Secure core build-up for high stability.

Visalys® Core is a fluoride-containing, dual-curing composite, developed for the fabrication of radiopaque core build-ups and core fillings and for cementing root posts. The product incorporates Active-Connect-Technology (ACT), which is unique in the market. This enables the material to bond actively with popularly used light-curing and dual-curing, single-step and multi-step adhesives, without an additional activator. The advantage for users is that it allows them to use the bonding agent they are used to — no matter whether it is a light-curing or dual-curing, a single- or multi-bottle system.

Call 877-532-2123 or your local representative David Cox at 781-929-8938 direct to place an order.

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Booth #420
Fixed and removable implant restorations: A solution for every arch

By Paresh B. Patel, DDS

When a patient presents with an edentulous arch or terminal dentition, implant treatment can be provided that improves not only form and function but also quality of life. For patients desiring better chewing capability, stability, esthetics and comfort than a traditional denture can offer, both removable and fixed implant restorations are superior alternatives.

As evidenced by the case that follows, in which one arch is restored with an implant overdenture and the other with a BruxZir® Full-Arch Implant Prosthesis, practitioners today have a great deal of clinical flexibility.

Case presentation

A 47-year-old male presented with terminal dentition in both arches resulting from periodontal disease and severe caries (Fig. 1). He had saved up enough money for a fixed implant restoration for his upper arch, for which he desired the most stable, functional prosthesis possible.

While he couldn’t afford such a restoration for both arches, he wanted a retentive appliance for his mandible. The patient accepted a treatment plan in which his maxilla would be restored with a BruxZir Full-Arch Implant Prosthesis and his mandible with an Inclusive® Locator Implant Overdenture.

At the surgical appointment, the patient’s remaining teeth were removed. Four Inclusive Tapered Implants (Glidewell Direct; Irvine, Calif.) were placed in each arch. Inclusive Multi-Unit Abutments (Glidewell Direct) were attached to the maxillary implants, correcting for their divergent angulation.

Having achieved sufficient primary stability, the implants placed in the patient’s maxilla were loaded with an immediate denture, satisfying the patient’s desire to leave the surgical appointment with a fixed maxillary prosthesis in place.

A lower immediate denture was modified and relined to seat over the mandibular implants during healing. The final radiograph taken after seating the temporary appliances confirmed excellent positioning of the implants (Fig. 2).

Three and a half months later, VPS impressions were taken. The restorative protocol for both prostheses included wax rims and setups. After final approval of the wax setups, a custom-tray final impression was taken of the maxillary arch to ensure the prosthetic design was accurate before milling the final restoration from monolithic zirconia.

The lab fabricated the final lower appliance, including denture caps that provide retention and stabilize the prosthesis. Based on the custom-tray final impression, the maxillary prosthesis was designed using advanced dental CAD software, and a provisional implant prosthesis was milled from PMMA.

At the following appointment, the Inclusive Locator Implant Overdenture was seated and checked for proper fit and function. Then the provisional implant prosthesis was screwed into place, and its teeth positioning, function and esthetics were verified.

With both appliances in place, the interocclusal relationship was checked and minor adjustments made. The patient wore the provisional full-arch implant prosthesis for a trial period of two weeks to verify the accuracy of the design before it was returned to the lab.

The final BruxZir Full-Arch Implant Prosthesis was digitally fabricated with precision and, as an exact reproduction of the test-driven provisional, fit perfectly and offered the aesthetics and function the patient had come to expect (Fig. 3).

The final restoration effectively addressed the unique circumstances of the case, providing the most durable, stable prosthesis possible for his upper and a lower restoration that greatly improves prosthetic retention.

Fig. 1: Preoperative condition of the patient. Note the high lip line, severe cervical decay present on the patient’s remaining teeth and lack of gingival support. (Photos/Provided by Glidewell Laboratories)

Fig. 2: Postoperative panoramic radiograph illustrates All-on-4 configuration of maxillary implants and axial placement of the mandibular implants, which would facilitate a passive fit of the lower overdenture.

Fig. 3: The final BruxZir Full-Arch Implant Prosthesis completes a dramatic oral reconstruction for a patient who presented with terminal dentition, restoring form, function and quality of life.
The Planmeca Sovereign is a combination of sophisticated engineering, innovative technology, and award-winning design. A motorized chair swivel and a motorized base provide exceptional ease-of-use for any treatment need, such as CAD/CAM, implantology, laser treatment, prosthodontics or even anaesthesia – all in the same room. Motorized adjustability position patients of all sizes, providing unmatched patient comfort and optimal working ergonomics for the dental team.

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For decades, the most frequently used medicament for pediatric pulp therapy has been formocresol, despite potential safety concerns arising from formaldehyde content. While most pediatric dentists are aware that mineral trioxide aggregate (MTA), a bioactive bioceramic that contributes to pulp regeneration and tooth viability, has been proven in numerous clinical studies to have a high success rate, its high cost has made the peace of mind it can provide simply unaffordable.

MTA is a bioactive, non-cytotoxic medicament that is indicated for pulpotomies, pulp-capping and apexification. MTA does not contain formaldehyde, and several clinical studies confirm that MTA is at least as effective, if not superior, to formocresol. According to NuSmile, known for its pediatric restorations, the peace of mind for the pediatric dentist to provide a biocompatible yet cost-effective pulp therapy restoration is now within reach because of the company’s recent launch of NuSmile NeoMTA™.

NeoMTA helps make peace of mind affordable for pediatric dentists

By NuSmile Staff

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NuSmile NeoMTA is formulated, packaged and priced specifically to meet the needs of pediatric dentists. According to Mark Binford, NuSmile’s senior vice president of new product development: “Most MTAs are messy to work with, with the texture grainy in consistency and hard to place in the pulp chamber. Another big issue with many MTAs is staining, which is even a problem with some white MTAs. Stains can start to show after one to six months, which is something no parent wants to see.”

Binford said that NeoMTA is different. “NuSmile NeoMTA, when mixed, forms a putty that is easy to place and manipulate. Clinicians simply mix the medicament’s ultra-fine powder with NeoMTA’s proprietary gel. Achieving the desired consistency requires only altering the powder/gel ratio.”

He continued: “The gel also enables wash-out resistance in less than five minutes. The cement sets more quickly to minimize chair time, which is a big advantage with pediatric patients. NuSmile NeoMTA is non-staining; it will not discolor over time.”

With NeoMTA, the restoration can be completed as soon as the MTA has been secured in the pulp treatment area using flowable composite or glass ionomer.

The company recommends using NuSmile BioCem, a universal bioactive cement, but any flowable composite or RMGI will work. Another innovative feature, according to the company, is NuSmile NeoMTA’s cleverly designed desiccant-lined bottle. It protects the powder from moisture and allows the clinician to dispense only what is needed, which further contributes to the medicament’s low cost-per-dose.

“NuSmile NeoMTA delivers the peace of mind, efficiency and economy our customers deserve and the healthy outcomes their patients deserve,” Binford said.