PreXion’s digital treatment planning results in predictable patient outcomes

Edentulous patients can benefit from the integration of CBCT data

By Siamak Abai, DDS, MMedSc

The diagnosis and treatment planning of edentulous patients with the integration of cone-beam computed tomography (CBCT) data and digital treatment planning results in predictable treatment outcomes.

As the new standard of care turns toward technological advances with CBCT scans at the forefront, clinicians and patients benefit from ever increasing accuracy and minimally invasive procedures.

The PreXion CBCT scanner and treatment-planning software allow the clinician to properly diagnose and treatment plan edentulous patients based on the final restoration design. A preliminary diagnostic CBCT scan (Fig. 1) is beneficial to properly visualize in three dimensions the extent of bone loss and the prognosis of existing dentition.

When a patient presents with hopeless and non-restorable teeth, the proper treatment of extractions and fabrication of an ideal complete denture based on functional, aesthetic and phonetic guidelines is completed.

Based on a dual-scan protocol (Figs. 2a, 2b), the final tooth position and prosthetic outcome is transferred onto a digital treatment-planning protocol. The treatment-planning software allows the clinician to propose the proper implant position based on anatomical limitations.

This data can be utilized to fabricate a surgical guide for guided implant placement, resulting in minimally invasive surgery, increased accuracy and faster healing and restorative times. A post-operative CBCT scan confirms the accuracy and final implant position (Fig. 3).

About the author

SIA MAK ABAI, DDS, MMedSc, is a graduate of Harvard University’s Advanced Graduate Prosthodontics program with a master’s degree in oral biology and prosthodontics. He received his doctorate of dental surgery degree from Columbia University College of Dental Medicine, followed by two years of advanced education in general dentistry training at the Columbia University Medical Center. Abai practices implant, aesthetic and reconstructive dentistry at the W-Clinic in Newport Beach, Calif. He serves as a lecturer and clinical attending at the UCLA School of Dentistry’s Advanced Graduate Prosthodontics program.

OCO Biomedical presents ‘The Next Generation of Dental Implant Technology: The Reality of Osseous Fixation’ at AAID annual meeting

By OCO Biomedical Staff

A s a highlight to the American Academy of Implant Dentistry’s (AAID) program theme, “New Trends, Techniques & Technology — Innovations in Implant Dentistry,” OCO Chief Operating Officer and Director of Education and Clinical Affairs Charles Schlesinger, DDS, FICOI, will present “The Next Generation of Dental Implant Technology: The Reality of Osseous Fixation,” at 9 a.m. on Wednesday, Nov. 7, from 9:30 a.m.–5 p.m. and Saturday, Nov. 8, from 9:30 a.m.–1 p.m.

Schlesinger’s lecture will cover the impact of osseous fixation and implant choice and how this process expedites immediate-loading capabilities, which allows practitioners to predictably re-store an implant in a short period of time.

In addition to Schlesinger’s lecture, OCO Biomedical Inc., a global leader in implant dentistry products, technology and training, will showcase “The OCO Advantage: A Complete Dental Implant Solutions Approach,” featuring the company’s updated product line and innovations in technology.

Information about the expanded AGD-Pace accredited 2014-15 educational courses, workshops and registration discounts for AAID participants to the upcoming 2015 OCO Biomedical International Implant Symposium will also be available.

Official exhibition hours are Thursday, Nov. 6, from 9:30 a.m.–7 p.m.; Friday, Nov. 7, from 9:30 a.m.–5 p.m. and Saturday, Nov. 8, from 9:30 a.m.–1 p.m.

“OCO Biomedical has always emphasized the critical importance of continuing education for practitioners to improve patient care and build practice performance,” Schlesinger said. “Over the years, based on our constant research and assessment of the ever-evolving needs of the dental community and, given the fact that implant dentistry is now one of the fastest growing segments of the industry, OCO remains totally committed to providing practitioners with cutting-edge products, technology and training excellence essential to success in this very competitive field.

“OCO’s entire program is designed by dentists for dentists. We look forward to sharing our exciting, new developments again this year with our many AAID colleagues and associates.”

In addition to OCO’s lecture and exhibition, the company has announced that Schlesinger and OCO Biomedical’s Founder and President David D. Dalise, DDS, will be available at the AAID meeting for mentoring and consultation as schedules permit.

Instructor biography:

Charles Schlesinger, DDS, FICOI

S ch le si n g e r  is a na tio n a lly recognized speaker, prolific clinical author and OCO chief operating officer/director of education and clinical affairs. He graduated from the Ohio State University College of Dentistry in 1996 and completed a general practice residency at the VAMC San Diego. He then went on to become the chief resident of the GPR program at the VAMC W Los Angeles. While at VAMC, he received extensive training in oral surgery, implantology and complex restorative dentistry. Schlesinger maintained a private practice in San Diego prior to assuming his executive duties at OCO Biomedical, Inc., headquartered in Albuquerque, N.M.

Since 2007, Schlesinger has been an industry-leading implant educator, speaker and mentor, well-known throughout the dental community for his engaging, no-nonsense, practical lecture style and comprehensive, cutting-edge knowledge of implantology.

About OCO Biomedical, Inc.

Established in 1977 and headquartered in Albuquerque, N.M., OCO Biomedical, Inc. is a privately-owned dental implant company. In addition to the company’s vast network of practitioners using OCO products in the United States, the company has an international network of distributors located in Asia, Central and South America, Europe and the Caribbean. OCO Biomedical is a world leader in creating and supplying patented, brand-name dental implant products, technology and AGD-Pace C.E. accredited education and training in North America. OCO Biomedical is a implant company that provides complete implant solutions, allowing practitioners to serve their patients effectively while simultaneously building practice performance.
The success of the Spanish implant manufacturer Microdent Implant System is based on two pillars: clinical research and quality products. The company has 40 years of experience in high-precision mechanics and, for more than 25 years now, has exclusively focused on the manufacture and distribution of dental implants, prosthetic attachments and surgical instruments.

Highlights of Microdent’s surgical instruments include:
- Atraumatic ridge expander kit
- The sinus membrane-lifting device Cortical Fix
- Self-tapping implants
- First conical implant for bone expansion
- Single-phase implant prostheses for “cement-bolted” implants
- First attachment designed for immediate loading

Microdent founder Eugenio Gil studied and trained in Switzerland, specializing in the manufacture of small precision parts in the 1960s. “With a group of company specialists from Bechler, we prepared special machines for producing electrical contacts for NASA’s rockets,” Gil said. “This professional experience helped me to apply high-precision technology to dental manufacturing.”

Since 1989, the company has kept accurate statistics of the success rates of its implants and osseointegration time-tables.

Titanium manufacturing was unique at the time Microdent began working with it, so dentists and many Spanish manufacturers asked the company for advice. The results of those implants have been so reliable that Microdent still maintains “all the clients who began using our implants then,” Gil said.

Asked about the essential quality parameters of an implant, he explains there are several key issues:
- Quality and accuracy of the internal thread of the implant. Adjustment to the retention screw of the prosthesis is too loose in most implants, which causes serious problems after placing the prosthesis.
- Accurate fitting of the implant-abutment connection, as it should not allow space for bacteria growth.
- For adjusting individual prosthetics, rotation should be as tight as possible.
- Implant design is an important factor to avoid bone resorption problems.
- In small-diameter implants, load re-