



Lee Ann Engle

Looks, Ease Driving Use of Mini-implants

By Dell Richards

While technology constantly adds new choices to implants, patient demands also are driving some of the changes. Mini-implants as well as software templates for implant placement are just two of the latest innovations. Some dentists proceed with caution, others are pushing ahead.

Like many dentists, prosthodontist

Jeffrey Y. Nordlander, DDS, is using mini-implants for people who want immediate results and for some edentulous cases. "If patients want something implant-supported right after surgery, we use them," said Nordlander. "They can be immediately loaded."

The minis protect the other implants during the healing process.

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JEFFREY Y. NORDLANDER, DDS

He uses mini-implants primarily as a temporary solution, however, "We put temps in between the permanent ones," said the partner with Prosthodontic Dental Group. "So you need more sites."

For the patient, this means more bone, more money, and more risk.

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For Nordlander, who handles the complex cases referred to him by dentists throughout the Central Valley, protecting the patient is of paramount importance.

Even Victor J. Sendax, DDS, inventor of the IMTEC-Sendax mini-dental implant system — the only FDA-approved implant currently on the market — spoke of the risk. In a 2004 posting for the *Osseo News* blog, Sendax gave a tip on how to use minis so that dentists avoid exposing them "... to lateral force overload."

Meanwhile, others are forging ahead, using minis on a permanent basis. Sandy Kim, DDS, went into practice in Los Angeles with her father, John Kim, when she graduated from dental school more than a decade ago. They both have been using mini-implants on a permanent basis for more than three years. For their patients, the lower cost is a big factor.

"We have a lot of full-denture cases and the lower dentures are a problem after a while," said the associate of Dr. Kim's dental office, who also has her own practice in Garden Grove. "Implants stabilize the dentures and keep them from floating in the mouth. An implant is great, but some patients still cannot afford it."

Which bring in the minis. "The minis are cheaper — by a lot."

Because they advertise in Korean newspapers, the father-daughter team has patients flying in from as far away as Hawaii. To date, only one patient has

had problems, a woman with rheumatoid arthritis.

Kim is not alone. Stephen Hadwin, executive vice president of IMTEC Corporation, said minis are flying out the door. "They are one of our biggest products at the moment."

Because minis allow dentists to reach a consumer who can't afford the conventional system, or elderly patients who can't bear surgery, minis have experienced phenomenal growth in sales since they were introduced in 1999. "Sales have been very healthy for the past five years," Hadwin said. "They have experienced 40 to 50 percent growth."

While minis have given patients more choice, recently approved software and scanning systems help dentists with time and accuracy when placing any kind of implants, mini or regular.

Using software that scans X-rays helps Nordlander plan the placement of implants. "We use implant analogues for planning," said the dentist whose practice has three offices and two satellites. "With 3-D implant forms, you can superimpose your X-ray to see where the best placement would be."

Because of the cost, few dentists have adopted the system. And Nordlander said that the new guides help "translating the 2-D image on a computer screen into a patient's 3-D mouth."

Peter K. Moy, DMD, is one of the dentists currently using one of those guides: Nobel Biocare's "Teeth in an Hour" system. This treatment planning software and CT scanning create a 3-D image of the patient's mouth. The Nobel Biocare guide, as it's called, allows dentists to determine the placement of implants digitally while having an exact match made for the denture.

"The software helps identify where the implants go," said Moy, adjunct associate professor of Oral and Maxillofacial Surgery, Diagnostic and Surgical Services

at the University of California, Los Angeles, School of Dentistry. "That way, dentists can fabricate the bridge before the implants are placed and put them in the exact location they planned."

"Teeth in an Hour" refers to surgical time, not prep time. For dentists, the major benefit for is doing the CAD-CAM planning at the same time as fabrication. "You spend less time because the work is done during the work-up that you would do anyway," said Moy, who uses the software and templates for 80 percent of his implant patients at the UCLA Dental Implant Center. "You're eliminating two to three hours, which is quite a bit of savings, quite a bit of time you could be seeing other patients."

The one-time software cost is about \$5,000. Each template fabrication also adds about \$2,000 to the cost.

However, the restoration can be loaded immediately after surgery. "It's easier on the patient because all the work is done beforehand," said Moy, who helped introduce the guide in the United States and now also teaches its use. "It's a more predictable, more accurate way of treating patients."

"The procedure had been performed numerous times in Sweden," said Moy, who is a consultant to Nobel Biocare, adding the company paid him to fly over and watch the surgeon who had the most experience placing it. "That's when I came back and was one of the first to use the guide in this country."

While Moy thinks the future of this technology as "huge," Nordlander said patients still want to look good. Whether the dentist is doing the planning on a computer or using mini-implants, the teeth — and gums — need to look real. "The big issue with implants, at least with front teeth, is making the tissue around the implant look natural," Nordlander said.

The problem is the papilla between

the front teeth. "Re-creating that peak is an area where more work is needed," Nordlander said. "People are more conscious of having teeth — and gums — that look nice. We need to improve the contour and form of gums around the restoration."

When they do, dentists and patients undoubtedly will have even more options to consider.

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Diabetic Patients May Improve Sugar Control With Periodontal Therapy

The results of a recent study support the hypothesis that periodontal therapy may help metabolic control (lower HbA1c) in patients with diabetes.

The results suggest that the therapy may decrease a diabetic patient's HbA1c count by as much as 20 percent at three and six months following treatment. According to the American Diabetes Association, HbA1c provides patients with a snapshot of their average blood sugar changes in the past two to three months and gives them a good idea of how well their diabetes treatment plan is working. A healthy HbA1c count ranges between 4.0 to 6.0. This study appeared in the April issue of the *Journal of Periodontology*.

"We found that conventional treatment for chronic moderate generalized periodontitis, which included a simple, nonsurgical procedure called Scaling and Root Planing (SRP) lowered the study group's HbA1c count from 7.2 to 5.7," said study authors Antonio Bascones, a professor, and Dr. Ricardo Faria-Almeida, both of the Department of Medicine and Buccofacial Surgery of the Complutense University in Madrid, Spain. "This could significantly put diabetic patients who are just above the normal HbA1c range into the healthy range and reduce their risk of serious complications from diabetes."

Bascones warned these findings should not be considered definitive or universally generalizable because of the study sample size. Additionally, this study compared the response to conventional periodontal treatment between type 2 diabetic and nondiabetic patients with chronic moderate generalized periodontitis and did not include a group of diabetics that was not undergoing periodontal treatment. The absence of this information is a limitation because it is unknown how diabetic patients who were not undergoing periodontal treatment would have progressed.

"For a long time we've known that diabetic patients have a higher risk of developing periodontal disease compared to nondiabetics," said Kenneth A. Krebs, DMD, and president of the American Academy of Periodontology.

For more information about periodontal disease and treatment is available online, www.perio.org. A brochure, "Diabetes & Periodontal Diseases" is available by calling (800) FLOSS-EM.