A less invasive, predictable method for treating periodontitis

Lloyd V. Tilt, DDS, MS, PC, discusses the LANAP protocol

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The LANAP protocol for the treatment of periodontal disease is an alternative to conventional scalpel/suture flap surgery. The procedure, which utilizes the PerioLase MVP-7 digital dental laser available from Millennium Dental Technologies, is designed to offer a vastly less painful and less invasive regenerative treatment for patients.

A 10-year, peer-reviewed retrospective comparative study conducted by periodontist Lloyd V. Tilt, DDS, MS, supports the use of the FDA-cleared LANAP protocol as an effective long-term gum disease treatment. The study documents use of the LANAP protocol in private practice, showing effectiveness against tooth loss.

Tilt’s study followed treatment of 107 patients over the course of 10 years — 68 percent of whom were suffering from severe case IV periodontitis, measuring tooth survival as the benchmark. The retrospective study compared Tilt’s research to three other tooth survival studies of conventional periodontitis surgery. Tilt’s research shows the LANAP protocol was at least or more effective than other treatment modalities in retaining teeth in patients with periodontal disease.

“As part of a comprehensive treatment plan, the LANAP protocol yields consistent, predictable results, and is a preferred method of treating periodontitis,” Tilt said.

In an interview with laser, Tilt talks more about the study and his work as a periodontist.
We all owe a tremendous debt of gratitude to those who have focused on research, improving our knowledge of dental diseases, and improved and expanded treatment options for our patients. I am particularly happy with the opportunity I’ve had over the past 13 years to be involved with lasers and the surgical treatment of periodontal disease, adding another treatment option for doctors and patients to consider.

What do you find most rewarding about the work you do?
As individuals and as a professional organization, periodontists have declared their objective as helping their patients maintain their natural teeth in good comfort, function and esthetics. Virtually all instruments, techniques and materials that have been developed in the last three decades in periodontics have been with an eye toward restoration or regeneration of lost tissue and attachment.

Working with the LANAP protocol and with Millennium Dental Technologies has given me an avenue to contribute to that objective. I’ve been very grateful to contribute in a small way to research on the LANAP protocol, to speaking about and disseminating the information, and in educating and training numerous dentists who are now providing this service to their patients.

Earlier this year, you discussed results of research on the LANAP protocol at the Academy of General Dentistry meeting in Philadelphia, and the research was published in the AGD publication General Dentistry. For those who are not familiar with the research, can you please summarize it?
There is a progression of studies and data through which all new procedures or technology must go. This begins with case studies, retrospective studies, prospective studies on through meta-analysis once enough information is available. This is often a 20-year process to gain all the data that we, as professionals, feel we need to prove the validity of the subject. It is the objective of everyone associated with the LANAP protocol to fill in those levels of data.

The AGD has been very helpful in publishing two studies associated with the LANAP protocol. The first was published in 2004 and involved the collection of data from LANAP-treated patients from five different clinical locations, focusing on pocket reduction. There were two interesting pieces of information that stood out: First, the pocket reduction data with the LANAP protocol was comparable to pocket reduction data from classic periodontal studies utilizing osseous surgery or Widman flaps; and, second, the pocket reduction data from each of the five sites was almost identical.

This data was exciting in that we had comparable pocket reduction with a far less invasive, more tissue-sparing surgical procedure, and that with the proper equipment and the proper training treatment results could be duplicated.

The second study, published in 2012, involved tooth survival data. We wanted information on how the LANAP protocol compared to more conventional periodontal surgical treatments when it came to patients keeping their teeth over time. Again, there were two important points to come out of this study: first, that tooth survival with the LANAP protocol was at least comparable to that of more conventional, more aggressive surgical treatments; and, second, that long-term prognosis depended very heavily on the periodontal case type when the patient began treatment.

Patients with moderate periodontal disease (Type III) lost only 0.3 percent of teeth over a 6.2-year time span, but patients with advanced (Type IV) disease lost 2.3 percent of teeth over that same time — almost an 800 percent increase just based on case type. There is an enormous advantage to early diagnosis and early treatment when it comes to keeping teeth over time.

What benefits does the LANAP procedure offer to the patient, compared with more traditional methods of treatment for periodontal disease?
For those patients who need surgical treatment of periodontal disease for access for root debridement, for pocket reduction and for regeneration, the benefits of the LANAP protocol over conventional periodontal surgical procedures include the following: shorter overall treatment time (most of the active treatment is accomplished in two appointments), minimal or no post-operative pain (most patients receive only ibuprofen), no post-op bleeding, no swelling or bruising, very rapid patient recovery (minimized time off work), little or no loss of soft-tissue height (gingival recession), no post-treatment tooth sensitivity, no cosmetic changes to a patient’s smile, pocket depth reduction comparable to more aggressive procedures, regeneration of lost attachment (bone) comparable to more aggressive and more material-dependent procedures.

The LANAP protocol is not the answer for every patient, or every surgical need in periodontics. But it does provide a wonderful treatment option for most patients with moderate to advanced periodontal disease, and does not eliminate any other treatment option should a doctor feel something else is needed.

Is the LANAP procedure ideally performed by general practitioners, those who specialize in periop, or both?
The LANAP protocol is ideally performed by those who have a desire to treat periodontal disease in their practice and who are willing to have the right
‘Even though lasers have been available in dentistry for approximately 30 years, they are still very poorly understood by most. A laser is not a laser. Each of the laser wavelengths available has very specific things it can do well, as well as many things it cannot do well.’

The Millennium Dental Technologies website, www.lanap.com, would be a good place to start, with links to publications, videos, patient testimonials and more. There are many doctors around the country now giving presentations on the LANAP protocol. These will provide a good overview of the technology.

There are several peer-reviewed studies available from the company or from www.pubmed.com using the keyword LANAP. These include the two studies published in General Dentistry, and a prospective human histology study published in 2007 looking at regeneration of attachment with the LANAP procedure. There is a second prospective human histology study that was published in September. Millennium Dental Technologies also maintains a current list of clinicians using the LANAP protocol and may be able to refer doctors to speak with someone in their area on a one-to-one basis.

It has been our goal to provide our profession with a less invasive, predictable method for treating many of our patients with periodontitis. The LANAP protocol is not magic; it’s not the silver bullet we’d all like to have as we deal with a very difficult and complex disease process. But it has proven to be a great option for many of our patients. The LANAP protocol does not stand alone as a periodontal treatment. The LANAP protocol, like any other periodontal treatment option, is dependent on long-term maintenance care, on monitoring patients over time, and on changing directions with treatment when indicated. Whether a doctor chooses to incorporate the LANAP protocol into practice, or to refer to a LANAP-trained colleague, I encourage everyone to seek accurate information on lasers in dentistry and in periodontics._