

Light Touch for Dentists

Millennium's laser device and process treats infected gums while sparing patients the pain of scalpel surgery.

By **DEBORAH CROWE** Staff Reporter

THERE aren't a lot of things that scare Redondo Beach rocket scientist Jo Kennedy, but a scalpel-wielding dentist hovering anywhere near her mouth is one of them.

But when she learned that some much needed surgery for her infected gums could be performed with a tiny laser beam, the 52-year-old Kennedy relaxed.

"Gum surgery scared the dickens out of me, but my mouth was hurting and I wanted to save my teeth," said Kennedy, whose engineer husband happens to design lasers himself. "Once I found a dentist who could do it, I was so pleased that it wasn't bad at all and I only had to take some ibuprofen afterwards."

That's the kind of positive patient feedback that Cerritos dentists and entrepreneurs Robert Gregg and Delwin McCarthy say is driving sales of a breakthrough dental laser device they developed through their Cerritos company **Millennium Dental Technologies Inc.**

The PerioLase MVP-7 soft-tissue laser is the only device on the market that can perform the so-called laser-assisted new attachment procedure, also known as LANAP – a novel treatment for infected gums that the Food and Drug Administration approved in 2001.

"My patients would tell me they'd rather lose their teeth than get their gums cut," said McCarthy. "This procedure isn't completely pain free, but it's close."

In Los Angeles, having the laser surgery can cost between \$2,000 under a dental HMO plan to \$8,000 for a higher-end dental practice – depending on how much of the gums are being treated. That's equivalent in price to traditional surgery, according to the company.

Dentists have to shell out a lot more, of course, for the machines and the training, which the company sells as a package for \$69,000. Millennium sold about 200 units last year and hopes to sell as many as 230 this year targeting both periodontists, who are gum specialists, and regular dentists. The procedure also was recently approved in Canada.

In fact, the ease of use has meant that most sales so far have come from general dentists, who normally shy away from periodontal work, which is messy, time consuming and not necessarily lucrative for a regular practice.

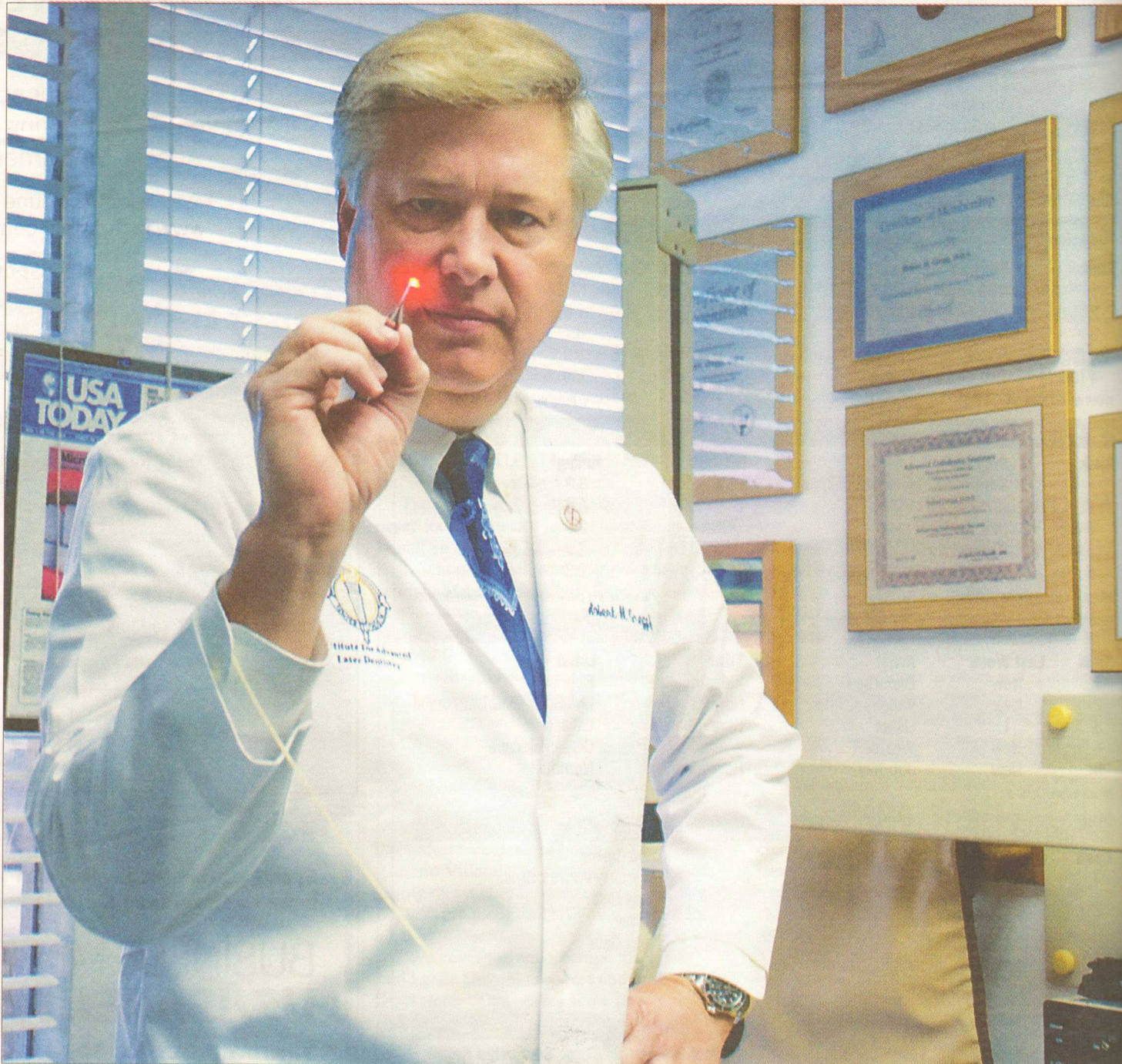
Eric Johnson, who performed the procedure on Jo Kennedy and has a general practice in Torrance, two years ago was looking for a way to expand his services.

"I hadn't done any surgery since dental school, but when I heard Dr. Gregg speak, I realized, 'I could do this,'" said Johnson, who now does four to five laser procedures a month. "It's actually one of the more enjoyable procedures I do."

Zapping away

In traditional periodontal surgery, gums are cut in order to scrape tartar off the roots of the tooth. Drills are used to reshape the bone, and the gums are repositioned around the tooth with stitches. The procedure often can take several sessions, followed by a lengthy recovery period where the gums and exposed roots are sensitive and painful.

The laser-assisted new attachment procedure uses a near-infrared laser that zaps away only bacteria and infected tissue, which has a darker pigment than the surrounding healthy gums.



Bright Idea: Dentist Robert Gregg with Millennium Dental Technologies' PerioLase MVP-7 at his Cerritos office.

GABRIELA GONZALEZ/LABJ

Millennium Dental Technologies Inc.

Headquarters: Cerritos

Founded: 1994

Core Business: Proprietary laser gum surgery device and treatment protocol

Employees: 35 (up from 22 last year)

Goal: To make laser-assisted gum surgery the standard for treating infectious periodontal disease

Driving Force: Desire of dental patients for more advanced and less painful treatments to save their teeth as they age

After the cleaning, the laser's heat seals the gums with a thermal blood clot, creating a physical barrier to any bacteria or tissue that could re-create gum pockets. The laser procedure has the added benefit of helping connective tissue and bone form between the gums and teeth, according to published clinical data. In theory, that means less chance of recurrent infection.

"Critics will say your treatment is equal to what we're doing and we can do it with a cheap scalpel blade, but we say right back to them, according to statistics not a lot of people are buying what you're selling," Gregg said.

"Sometimes they're in a little bit of denial about how much pain a scalpel can cause."

But becoming certified to use the machine isn't cheap or easy.

In addition to the \$69,000 cost for the machine and training, dentists have to pay for their travel and lodging expenses near Cerritos. The initial training is three days, and dentists are supposed to return at six and 12 months for follow-up training.

San Francisco dentist and attorney Edwin Zinman, who is an expert on California dental law and procedures, and lectures at professional events, said the device creates a "new paradigm" for gum surgery. But he acknowledged the cost is a drawback.

"It's not an inexpensive device, which is one of the limitations in getting it adopted," said Zinman.

Tech oriented

McCarthy has had an interest in high-tech dental techniques, and in 1987 started experimenting with some of the first intra-oral cameras, which would allow dentists to view the inside of a patient's mouth on a TV monitor.

That interest spread to an early dental laser under development by a company called American Dental Laser. McCarthy, who then was practicing in Hemet, became part of a small group of dentists whose research was used to obtain Food and Drug Administration clearance for the device.

McCarthy became acquainted with Gregg

after the latter bought one of the first lasers after it went on the market in 1990. McCarthy eventually decided to move his practice to Gregg's building in Cerritos in 1994, and the two partners began experimenting with better laser dental procedures.

Then they took the next step and – drawing on their own capital – worked with another laser company on a contract basis to develop, test and get FDA clearance for the PerioLase device and the proprietary protocol.

The laser units are assembled at a company-owned plant a few miles from the company's headquarters, just west of the Cerritos Auto Mall. McCarthy said he's particularly proud that all but two components are manufactured in the United States.

As demand has grown, Millennium now employs 35 employees, up from 22 a year ago. The company has trained around 700 dentists so far, and – most promising – the percentage of periodontal specialists is growing to around 20 percent of each class.

Lakewood periodontist Andrew Satlin said many of his fellow specialists are leery of embracing laser technology because they see the switch as throwing away years of training.

"I struggled with that myself but came to the conclusion that I needed to be able to offer more options to my patients," he said. "It's really worked. I've been able to treat patients that never would have considered surgery before."