



Tiny medical tool gets big attention

*Susan Lundine Associate Managing Editor
Orlando Business Journal*

WINTER PARK -- Repairing cut or torn tendons is an iffy proposition. Up to 46 percent of all such surgeries fail, undone by doing something as simple as closing the hand into a fist or lifting a set of car keys.

"We haven't come very far with how we put tendons together," says Dr. Melvin Rosenwasser, chief of hand surgery at New York Presbyterian Hospital in New York and orthopedic surgery professor at Columbia University's medical school.

Now, though, Ortheon Medical LLC, a little known Winter Park start-up, is poised to begin overseas sales of a new surgical system that could change forever the way orthopedic surgeons repair hand, shoulder and Achilles tendons.

Rosenwasser, a paid investigator on certain studies of Ortheon Medical's products, adds, "This is a major step forward."

Trading sutures for steel

Rosenwasser isn't the only one bullish on the company's product.

"We've gotten phone calls from hospitals all over the country wanting to buy this," says Bill Christy, Ortheon president and CEO.

Almost 2 million people worldwide suffer cut or torn tendons each year, the upshot of everything from industrial accidents to stray fishing hooks to errant cigar cutters to games of pick-up basketball.

The traditional fix involves sewing tendons together with sutures. But it's hard to get good control of a tendon with needle and thread, say surgeons, and the sutures easily can rip out of place.

"The results are quite variable, from good to dismal," says Rosenwasser. "We frequently have to do secondary procedures."

Patients who have had hand tendons repaired are not allowed to actively grip and close their hand for up to three weeks after surgery. That, in turn, can lead to internal scarring, and possible permanent loss of motion.

"It would be foolhardy after a suture repair to tell a patient to start moving their hand," says Rosenwasser. "And many of them have to learn to live with hands that are not normal for the rest of their lives."

But with Ortheon's device, he says, "These patients can make a tight fist immediately after the operation without rupturing -- which is quite dramatic."



Here's how it works: A tiny corkscrew-shaped steel coil is twisted into the rope-like fibers of each end of the severed tendon. Then a stainless-steel wire is threaded from one coil to the other and locked into place by a metal bead: an "ingenious device," says Rosenwasser, who has performed clinical trials using the device in South Africa.

"The device becomes part of the tendon, and is along for the ride," says Christy.

Another plus: The device, dubbed Teno Fix, is three times stronger than traditional sutures, says Dipak Rajhansa, Ortheon's vice president of marketing.

Company officials believe their product could reduce the failure rate of tendon repair surgery to as low as 10 percent.

The device may receive federal approval for surgically repairing tendons in hands in the United States as early as late 2002.

Overseas sales, though, will begin in South Africa and Europe beginning this month. The product should be available in Australia by the end of the year, and in Japan in less than two years.

"We'll be global before you know it," says Christy, who predicts sales will reach \$58 million in five years. The CEO points out that worldwide, tendon repair is a \$2 billion market. And, he adds, "It can be a very lucrative business just doing hands in the United States."

Curious surgeons, willing buyers

A homegrown entrepreneur who was educated at the University of Central Florida and Rollins College, Christy credits Dr. Lawrence Lubbers, clinical associate professor of surgery at Ohio State University, with developing the basic concept of Teno Fix.

"He solved the problem with a concept," says Christy. "We turned it into a product."

He and a handful of other investors founded Ortheon two years ago, and have invested \$10 million to date. Seventy-five percent of the firm is held by Christy, his father and two investors. All employees have an equity interest, as well.

Growth has come quickly: In the past 24 months, the firm has ballooned from four employees to 21 engineers, sales and marketing representatives, quality control workers and administrative staff. Ortheon's 7,000-square-foot Winter Park office already is cramped, and Christy anticipates expanding by January.



Meanwhile, demand continues to build, in part because the firm is having leading orthopedic surgeons do the clinical studies, write medical papers and give talks about it.

In addition, Ortheon sets up a booth at medical trade shows to demonstrate the product to surgeons -- a setting in which company officials have found themselves surrounded by surgeons seven-deep wanting a look at the new device.

Ortheon plans to hire sales representatives around the world. But Christy doesn't expect the device to be a hard sell. "A lot of potential buyers are coming to us," he says. "Which is a great place to be."