NEW X-STOP IMPLANT PUTS A HALT TO PAIN

by Steven Wagner

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Dr. Arya Shamie holds the tiny X-Stop implant that helps halt pain from spinal stenosis.

After 2-1/2 years of suffering with painful spinal stenosis, Molly Taguchi was losing hope. She had undergone various treatments, including epidural-like injections, but the pain in her legs and buttocks always returned.

Then Dr. Arya "Nick" Shamie, a spine surgeon at Santa Monica-UCLA Medical Center and assistant professor of orthopaedic surgery and neurosurgery at the David Geffen School of Medicine at UCLA, entered the picture.

Taguchi, 61, of Los Angeles, had been set to undergo a traditional laminectomy, in which portions of the vertebrae are removed to eliminate pressure on the constricted spinal cord and nerves. However, just in the nick of time, the FDA approved a new medical device called the X-Stop Interspinous Process Decompression System.

Fortunately for Taguchi, her physician, Dr. Shamie, had inserted the device in more than a dozen patients while a resident at St. Mary's Medical Center in San Francisco, where he trained under the device's inventors, Drs. James F. Zucherman and Ken Hsu. Dr. Shamie was well aware of the device's promise, knew that FDA approval was close, and recommended the procedure for Taguchi — an insurance collector for UCLA Healthcare — shortly after the device received the go-ahead by the agency.

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Molly Taguchi had instant pain relief after undergoing the procedure.

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Taguchi's procedure on Jan. 19 was a landmark of sorts. It was the first one in the U.S. performed outside of St. Mary's since FDA approval in November 2005. Dr. Shamie is one of only a handful of orthopaedists nationwide with experience implanting the device.

"I don't routinely get excited about new technology, but this is so superior to what we've been using," Dr. Shamie said. "I'd been asking Dr. Zucherman about its availability, and when the device was approved, I was one of the first surgeons in the U.S. to train with it."

X-Stop implantation is generally performed under local anesthesia in under an hour. The risk from general anesthesia is eliminated, trauma is minimized, hospitalization and recovery time are reduced.

The spine encloses the spinal canal, which contains a cylinder of nerve tissues called the "cauda equine" — the spinal nerves. Normally, there is space between the spinal nerves and the interior wall of the spinal canal so that nerves are not pinched. However, as a person ages, the ligaments and bone that surround the spinal canal can thicken, causing spinal stenosis — a narrowing of the spinal canal. The spinal cord and nerve fibers that exit the spinal canal become crowded and pinched due to this narrowing.

The X-Stop acts as a spacer that separates the spinous processes, portions of the vertebrae characterized by bumps that run along the spine. Spacing the spinous processes eliminates nerve crowding, releasing pressure on the spinal canal.

According to Dr. Shamie, X-Stop implantation is generally performed under local anesthesia in under an hour. The risk from general anesthesia is eliminated, trauma is minimized, hospitalization and recovery time are reduced, and patients generally return to work faster than they do following a laminectomy.

Taguchi returned home the day after surgery. Almost immediately, the pain she had been experiencing was gone.

"I was pleasantly amazed," Dr. Shamie said. "I knew this was a good procedure, but I was still surprised by how quickly her pain was gone."

So was Taguchi, whose official diagnosis included neurogenic claudication — difficulty walking due to nerve impairment.

"I couldn't believe that I didn't hurt anymore," she said. "I'd been in pain for so long, and now I wasn't. I thought I must be hallucinating."

According to Dr. Shamie, many other benefits may arise once the procedure becomes established. Because patients are able to return to work more quickly, time spent away from work — and lost income — should be minimized; on a larger scale, worker productivity around the country is likely to be enhanced. Patients also are more likely to continue working without having to undergo additional spinal procedures down the road. And, because the procedure is less costly than conventional surgery, the financial burden to health care in general is likely to be reduced.

"We have to look at the big picture, that this will help patients, return them to work faster and save money," Dr. Shamie said. "In today's health-care environment, those are important factors. Most important, however, is helping the patient, and in that regard, this procedure clearly will be successful."

Taguchi agrees. "I can walk normally, drive my car and do everything I used to do," she said. "I'm 100-percent improved. I'd recommend this to anyone." ■

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