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'Miracle' back-pain cure, made in Germany

Witt's End: No Back Pain, No Complications

By Todd Neff

Scotty Brown's back had been hurting since 2007. Then on Aug. 2, he got a most unwelcome 55th birthday present. He had eaten with a friend at the Golden Corral in Thornton and then twisted just the wrong way when he got back in the car.

Pop.

"I was literally on the ground screaming my head off," said Brown, an Aurora-based musician. "I had a gig that night – my birthday party. I told my friend, 'Take me to the club, man. I'll walk it off.' She's like, 'You're out of your mind. You can't even move.'"

J. Peter Witt, MD, with the tools of minimally invasive spine repair.

Brown spent several days in the Medicine Specialties Unit on the ninth floor of Anschutz Inpatient Pavilion 2 at University of Colorado Hospital. Three surgeons looked at his scans and pointed out what was wrong – a herniated disc. They all told him that UCH Spine Center surgeon J. Peter Witt, MD, now doing a minimally invasive technique pioneered in his native Germany, was the man he needed to see.

"If the pain's too bad, we can do it any day of the week," Brown recalled the surgeons saying. "But if you can wait do to this new procedure, just wait. It's so much less invasive."

Witt, the only doctor in the region performing the procedure and one of very few in the United States, was at the time teaching a course on the technique at a Minimally Invasive Neurosurgery Society meeting in Detroit. Brown decided to wait for him to return.

Made in Germany. Witt, director of the Neuro Spine Program in the University of Colorado School of Medicine's Department of Neurosurgery, has been doing surgical spine repair for years. The operations have involved everything from cancer to trauma cases. Often, such surgeries are complex, open procedures lasting six to 10 hours. But even a slipped or herniated disc has meant an incision and, often, the paring back of spinal bone to get at the disc for repair, which can affect the spine's stability.

In late 2012, Witt went to Dallas for training in a minimally invasive technique presented by Thomas Lübbers, MD. Lübbers, a surgeon in the north German town of Meppen, had worked closely with German medical device company Karl Storz GmbH to develop new endoscopic hardware that enabled more exacting surgeries with less collateral damage. These percutaneous lumbar endoscopic discectomies or decompressions are referred to as PELDs.

Witt used a six-month sabbatical in early 2013 to hone his endoscopic skills at the Murnau Trauma Center in Upper Bavaria.

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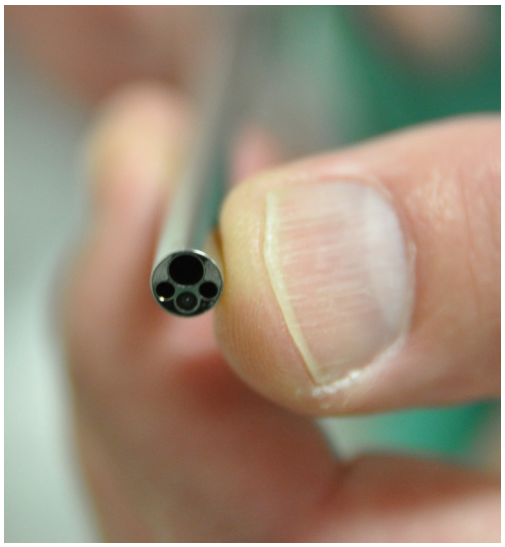
He came back with a loaned set of endoscopic tools and a desire to both use them and teach other American neurosurgeons the technique. Two weeks ago, several white boxes labeled Karl Storz Endoskop arrived at UCH. They contained the hospital's investment in the technique Witt is helping to pioneer, including several sets of endoscopes and accompanying surgical tools to cut, cauterize, shrink and grasp tissues in and about the spine.



The business end of a Storz endoscopic device. Witt is helping bring a pioneering endoscopic approach to repairing herniated discs from his native Germany to UCH.

What's new. The approach that Brown was waiting for advances the state of the art in a couple of ways, Witt explained. Until recently, endoscopic spine surgery was really more endoscopically assisted, he said. Surgeons used an endoscopic camera for guidance, but performed procedures directly through a 4-centimeter (1.5-inch) or larger incision. The incision Witt makes now is comparatively tiny – the 0.6-centimeter-diameter endoscope needs at most a centimeter-long incision as a point of entry.

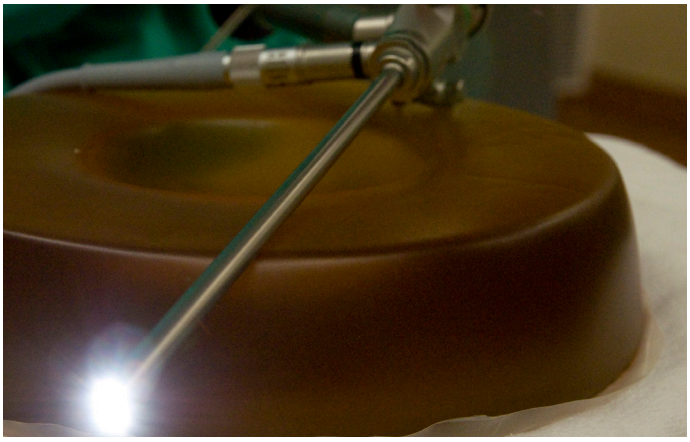
In addition, the Storz devices let surgeons access the spine straight back, at a 45-degree angle, or through the patient's side. Other new endoscopic techniques, which enable surgeries using tools delivered through the endoscope's working channel, afford access at 45 degrees, but off center from the spine, Witt said.

As it does in sports and war, angle of attack means a lot in spine surgery.

The new approach, Witt said, "allows you to get to discs that were, before, very hard to reach. You'd have to take off a lot of bone and soft tissue on both sides, so that was more invasive."

The approach afforded other advantages. Pain from a herniated disc happens when the disc's innards spill out of their spinal-column housings and press against nerves. Before the Storz tools arrived, the best-case endoscopic spine surgery involved penetrating the flawed disc and scooping out some of its jelly-like center, the idea being that the spillage pressing on nerves would then be sucked back in, alleviating the pain. Witt called this the "iceberg method."

"You kind of take away from the bottom, hoping that the iceberg kind of sucks it back in," he said.



Lights in the endoscope's tip illuminate the subject deep in the spine.

With the new tools, Witt's approach is direct.

"This set of instruments allows me to pull out of the disc space itself and then take a look at the disc herniation from the top – so you look at the iceberg from the top – and you see the anatomy around it," Witt said. He removes the errant disc material directly from the irritated area, rather than going after the base of the iceberg and hoping the soft material would slide away from nerves.

"Literally, these options weren't available before," he said.

Michael Torpey, the hospital's practice manager for the Spine Center and Rehabilitation Medicine, said the procedure opens new possibilities for patients.

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"This is really minimally invasive stuff, which from my perspective I think is an amazing addition to the palette of services that we're able to offer to our patients," Torpey said.

No three months. Witt did about two dozen such surgeries during his sabbatical in Germany and has performed a dozen or so more since his return to UCH in July. The procedure has demanded both his surgical and political skills. Insurers have typically required three months of painkillers and rehabilitation before paying for an invasive and potentially risky open disc procedure. This new procedure offers a middle ground for patients whose scans show disc damage and are in pain, but who want to get back to work. Witt has been explaining this to insurers, he said.

Aurora singer-guitarist Scotty Brown's solo gigs as well as those with his bands Psycho X, Tick 60, Dark Red Sky, and Riot Act have gone pain-free thanks to Witt's procedure.

"Who has three months to deal with this type of pain and discomfort?" asked Witt.

It's also a change for UCH, he said, which has "traditionally been set up for major four- to five-hour spine operations." PELD, he said, can and should be an outpatient procedure.

Torpey said that's a good thing, not only for patients on the Anschutz Medical Campus.

"It means that you can do the procedures in more places, and that our outreach to patients that we can help actually expands," Torpey said. Plans are afoot for Witt to offer the procedure to patients at the Lone Tree Ambulatory Surgery Center.

The musician's back. Scotty Brown had been in pain long before the episode outside the Golden Corral. For six years, he couldn't lie on his back and lift his left leg higher than about four inches.

"I just lived with the pain," he said. "It was always there. It never left. Some days I couldn't move at all."

Brown underwent the new endoscopic procedure on Aug. 16.

"I came out of anesthesia and the pain was 100 percent gone," he said. "I mean gone. Completely gone." He could lift his left leg as high as the right, he said.

"I'm still amazed by it – it just blows my mind," he said. "The incision never hurt, I never felt, like, any pain. I didn't even have soreness. I was just up walking."

The only complication he noted was a tight calf muscle, which he said was loosening up. That beat the numbness that had afflicted the left side of his leg for six years. That's now gone, too.

"I feel like I'm sitting here telling the story of a miracle, but for me, every day I wake up and I can't believe it," Brown said.