



SCHOOL OF MEDICINE

Department of Neurosurgery

UNIVERSITY OF COLORADO ANSCHUTZ MEDICAL CAMPUS

For Immediate Release

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University of Colorado School of Medicine, Department of Neurosurgery, Performs First Regional Procedure with Newly Approved Device to Prevent Herniated Disc Recurrence

The Barricaid®, Bone-Anchored Titanium Implant, Offers High-Risk Patients Lower Chance of Repeat Surgeries

AURORA, CO (November 1, 2020). Earlier this summer, the Department of Neurosurgery at the CU School of Medicine became the first place in the Rocky Mountain Region to perform a discectomy with repair of a large anular defect using a newly approved FDA titanium bone-anchored implant. Two patients were operated on by Dr. Peter Lennarson, Neurosurgeon and Spine Specialist at CU School of Medicine.



Dr. Lennarson (left), one of the first neuro spine surgeons in the region to perform this procedure, is hopeful that many patients who have had recurrent anular defects and herniated discs will finally have some permanent relief with this new technology.

His patient, Chris M. (right), who gave permission to be interviewed, says this procedure has been a true “game changer” for him. “I am finally standing straighter, and I have virtually no pain in that area.” Chris is confident to go out and do the recreational activities he loves, like golf. Once an extreme sports athlete, Chris has had repeated fractures and herniations and this is the first time in many years that he has been symptom free and optimistic about his potential for a normal life again. “I’ve even become engaged, because I finally feel well enough to move forward,” says Chris about his recent engagement to Kylene.



The Barricaid implantation procedure improves outcomes for patients who suffer from back pain due to a large anular defect and herniated disc in the lower back.

Disc herniation is one of the most common causes of lower back and related leg pain—or sciatica—in adults. A herniated disc occurs when a fragment of the disc nucleus protrudes through a rupture in the anulus, into the spinal canal. This herniated disc material, in turn, compresses the nerve, and causes pain. While initial medical treatment often includes rest, medication, and physical therapy, surgical discectomy is recommended for patients who have not had success with this more conservative approach.

In most discectomy procedures, surgeons enter the spine and remove the protruding piece of disc, relieving pressure on the affected nerve and thereby relieving pain. However, one in four patients have a large anular defect in the outer rim of the disc where it ruptured—leaving them vulnerable to repeat herniation.

The device, named Barricaid and manufactured by Intrinsic Therapeutics, repairs the large anular defect with a unique titanium implant that prevents further herniation of the disc. In a 554 patients, multicenter, randomized controlled trial examining the efficacy of the device, it reduced recurrent herniation in approximately 50% of the patients involved.

Several other neurosurgeons and orthopedic surgeons at CU School of Medicine are training on this new device, and surgeries may be widely available soon. “This device is invaluable for people who have chronic or repeat issues with disc herniations. Even though current surgeries are very effective for most people, about 25% of them are at high risk to re-herniate. This device will not only dramatically improve their quality of life, but it may save in hundreds of thousands of dollars in repeat surgeries and hospital stays,” says surgeon, Peter Lennarson, MD. Another University of Colorado Neurosurgeon, Dr. Brad Duhon is now using this device at Highlands Ranch Hospital, also with great success.

Barricaid received premarket approval for use by the U.S. Food and Drug Administration in February 2019, prior to the first U.S. implantation.

“This is a milestone in this region for spine patients,” says Neurosurgery Chair, Kevin Lillehei, MD. “We are proud to be the first in the region to offer this, and this demonstrates our commitment to ‘state of the art’ procedures and devices.”

The University of Colorado Department of Neurosurgery is part of the multidisciplinary Spine Center at UCHealth and is staffed by faculty from the CU School of Medicine’s Neurosurgery, Rehabilitation Medicine, Orthopedics and Radiology Departments. Over the past three years, over 26,000 patients have been seen and treated in the Spine Center.

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