

Mix of 2 pain-relief procedures can end chronic back and leg pain without drugs

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Help is on the way for patients who have undergone back surgery but who continue to suffer from chronic pain in their backs and legs, thanks to a novel technology pioneered by two Chicago-area pain management specialists.

Called a “hybrid technique,” the procedure combines an implanted electronic device called a dorsal column (spinal cord) stimulator with a newer technology known as peripheral nerve field stimulation (PNFS). This latest development in pain management gives patients drug-free relief from the severe, chronic back and leg pain of failed back surgery syndrome (FBSS), a condition suffered by nearly half of all spine surgery patients.

“Since 1968, physicians have used the dorsal column stimulator to control the leg pain common among patients with FBSS, but it does little to relieve back pain,” explains Eugene G. Lipov, MD, Director of Pain Research at the Northwest Community Hospital, Arlington Heights, Ill. “Recent studies have shown that peripheral nerve field stimulation is very effective in relieving back pain. This is what led us to combine these two technologies. Patients can have the best of both worlds: relief from leg and back pain they can’t get even with the strongest pain medications.”

Narcotics, such as codeine and morphine, don’t work well on nerve pain, which tends to be opiate-resistant. Implantable dorsal column stimulators stop pain signals from reaching the brain. Peripheral nerve field

stimulation is a newer technology that is more focused on shutting off pain signals further away from the spinal column. Used together, the dorsal column stimulator and peripheral nerve field stimulation effectively block the body's pain signals from the legs and back to the brain.

Performed as an outpatient procedure, the hybrid stimulator is implanted subcutaneously (under the skin) in the abdominal wall, side of the back, or in the upper hip area. It is approximately the size of a small cell phone. Typically, three electrical leads connected to the stimulator unit are then implanted in areas of the lower back and leg where the patient has felt the most pain. The patient is then able to control his or her pain by placing a small remote control device over the implanted stimulator. Patients feel their pain replaced by a mild tingling sensation. The hybrid stimulator can be left in place for seven to nine years, at which time a simple surgery is performed to replace the battery only, not the electrical leads.

“Using the hybrid technique we’ve literally seen patients’ quality of life dramatically improve right before our eyes,” says Jay R. Joshi, MD, Dr. Lipov’s research partner. “We have been able to offer hope and significant success to patients who have failed virtually every other treatment, including surgery, spinal injections, physical therapy, and medications. Many of our patients no longer need pain medications, and they quickly return to work and to the activities of daily living pain-free. It is a tremendous cost savings in terms of insurance claims, lost productivity at work, and offers patients an alternative to potentially addictive pharmacologic treatment.”

In 2005, there were 34 million physician visits for back-related symptoms, according to the National Center for Health Statistics. A review article published in *The Journal of the American Medical Association* earlier this year estimated an \$85.9 billion was spent in

treating spine problems in 2005, with the greatest cost increase coming from use of prescription pain medications. “Clearly, this is an enormous problem for Americans, physically, emotionally, and economically,” Dr. Lipov says. “But we believe this new procedure will restore quality of life to millions of patients who suffer from back and leg pain and who have not found relief from surgery or drug treatment.”

Drs. Lipov and Joshi have implanted the hybrid stimulator in 19 patients since August 2007. Patients report 60% to 100% reduction in pain using the stimulator; to date, no patients have had the hybrid stimulator removed. Lipov’s and Joshi’s findings will be presented at the American Society for Stereotactic and Functional Neurosurgery conference in Vancouver, British Columbia, Canada, in June.

Source: Davis MedPR

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