



A seasonal publication for friends of the Mayfield Clinic & Spine Institute

Minimally invasive X-Stop® Spacer offers quick fix for stenosis pain

A minimally invasive spine procedure that takes about as much time as a tonsillectomy is an excellent option for some patients who suffer from a painful lower back condition, says Christopher McPherson, MD, a neurosurgeon with the Mayfield Clinic.

Dr. McPherson, who has performed the X-Stop® procedure 30 times during the last three years, praises it for its simplicity and effectiveness. It is used in the treatment of select cases of lumbar spinal stenosis, a narrowing of the bony spinal canal, which can cause crowding of the nerve roots and a variety of symptoms, including pain in the leg or lower back and numbness or tingling in the lower back and legs.

The procedure, which utilizes the X-Stop® Spacer, a small titanium implant, can be an alternative to the more traditional laminectomy, a more complicated procedure that involves the removal of a small amount of bone. Both procedures work by enlarging the space between the bones in the back and reducing pressure on the spinal nerves.

“The X-Stop® is essentially a smaller surgery than the laminectomy,” Dr. McPherson explains. “It’s a 15- to 30-minute outpatient operation.”

The X-Stop®, a device manufactured by Medtronic, is designed to accomplish what people with spinal stenosis often attempt to do for themselves.

Continued on page 3.

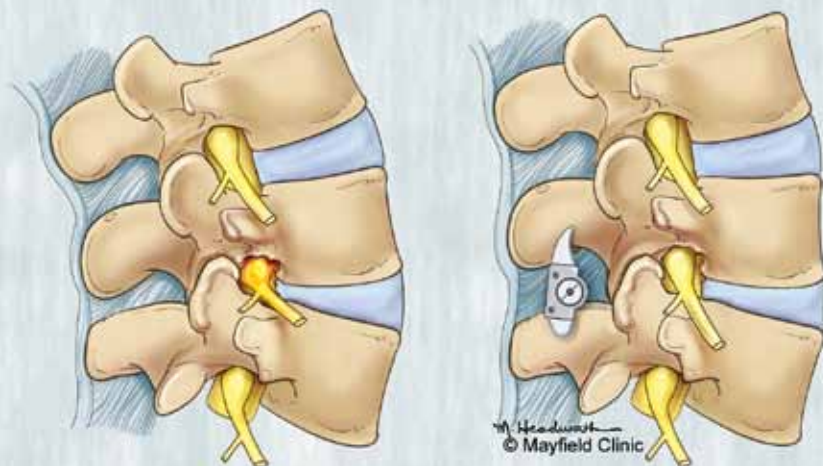
Check us out!



If you haven't visited us at www.mayfieldclinic.com in a while, please stop by! We've redesigned our site to help you get the information you need more quickly and easily. New features include “Exercise is Medicine” and “A Guide to Your Visit to Mayfield Clinic.”

Additional features include:

- Trusted health information
- Dozens of real patient stories
- Clinical trials listing/ research news



Illustrations showing (left) a crowded, painful nerve within a narrowed spinal canal and (right) the X-Stop® Spacer enlarging the canal and reducing pressure upon the nerve.



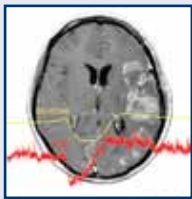
Darrell, 71, who underwent X-Stop surgery in 2009

“I was in a lot of pain. I couldn't stand up straight, and I had to bend my knees to walk. I could barely hobble into the house. Dr. McPherson said he could fix it, and I said, ‘All right, when can you fix it?’ He scheduled a date for me as an outpatient. They pushed me into the hospital in a wheelchair, I came out walking, and I've been walking ever since. No pain in my legs, no back pain, I've been doing great. They let me go back to work for two more years, and I finally retired.”

Outcomes...

Mayfield's commitment to evidence-based medicine

The Mayfield Clinic is committed to the practice of evidence-based medicine. That means the health care we provide is backed up by sound science. We use proven treatments that are the safest and most effective for each individual patient. When answers aren't clear-cut, or when solutions are unavailable, we try to find them by engaging in laboratory and clinical studies. Here is a sampling of our recent efforts to gather evidence about what works best for our patients.



What we found: Spreading depolarizations, electrical disturbances that spread through an injured brain like tsunamis, have a direct link to poor recovery and can last far longer than previously realized.

Where it was published: Brain

Who led Mayfield's efforts: Jed Hartings, PhD, Director of Clinical Monitoring for the Mayfield Clinic and Research Assistant Professor in UC's Department of Neurosurgery

Why the finding is important: "Although we knew that depolarizations occur in many patients who have suffered neurotrauma, we didn't know what they meant or whether they were relevant," Dr. Hartings says. "For the first time we now know that they relate to worse outcomes for patients who have suffered trauma to the brain. This finding could eventually lead to new therapies. If we can find a way to stabilize the brain's electrical activity and block spreading depolarizations, perhaps we can improve patients' outcomes."



What we found: Preservation of spinal nerve branches is as important during posterior fusion of the cervical spine as it is during posterior fusion of the lumbar spine; modification of specific surgical techniques can result in preservation of these nerves.

Where it was published: Clinical Neurology and Neurosurgery

Who led Mayfield's research efforts: Tann Nichols, MD, Mayfield Clinic Neurosurgeon

Why the finding is important: "This retrospective study is believed to be the first ever to study paraspinal muscular atrophy (PMA) in the cervical spine," Dr. Nichols says. "PMA is a known complication that can reduce quality of life by causing pain, muscle spasm, instability, or deformity. Our study shows that we can improve surgical outcomes for our patients through modified surgical techniques."

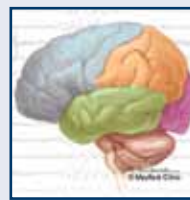


What we found: In the treatment of cerebral aneurysms, the number of embolization (coiling) procedures doubled while the number of craniotomies (opening the skull) for clipping remained stable from 1993 to 2003.

Where it was published: Journal of Neurosurgery

Who led Mayfield's efforts: Mayfield Clinic neurosurgeons Norberto Andaluz, MD, Assistant Professor of Neurosurgery, and Mario Zuccarello, MD, Professor and Frank H. Mayfield Chairman of the Department of Neurosurgery

Why the finding is important: This research was prominently cited in an article in AANS Neurosurgeon (2011, Volume 20, No. 1), which noted a continued upward tick in coiling procedures through 2006. The trend toward approaching brain aneurysms through an artery (for coiling) instead of opening the skull for clipping – when possible – suggests that new neurosurgeons will require expert training in endovascular coiling.



What we found: People with epilepsy who feel sad, disaffected, or hopeless are at greater risk for seizures than those who feel anxious, tense, and agitated. Individuals with higher levels of intelligence, who may be more affected by depressive symptoms, appear to be more negatively affected by emotional distress than those with lower IQ's.

Where it was presented: Epilepsy and Behavior, June 2010

Who led Mayfield's efforts: Hwa-shain Yeh, MD, Professor of Neurosurgery and Mayfield Clinic neurosurgeon

Why the finding is important: Few studies had explored the potential benefits of optimism on mental and physical health in people with epilepsy. This study sheds light on an under-studied area and points the way to future research into whether preventing depressive symptoms can reduce seizure frequency.

X-Stop®, continued from page 1

“People with stenosis lean forward when they walk,” Dr. McPherson explains. “I can spot them in the grocery store because they’re leaning forward on their carts. When they flex forward, they open up the space in the spine for the nerves. People with stenosis are self-treating by flexing forward. The idea behind the X-Stop® device is to recreate that flexion inside the body.”

The outpatient procedure, which is performed by several Mayfield physicians, is usually done under general anesthesia, although local anesthesia is an option. Dr. McPherson begins the procedure by making a small incision in the lower back. He then places the X-Stop® between the spinous processes, the thin projections from the back of the spinal bones, in the affected area. The implant opens up space and prevents the patient from extending his or her back and putting pressure on the spinal nerves. Patients go home the same day.

Dr. McPherson says the procedure is suited to individuals with stenosis who experience pain relief when they lean forward and who are either unable to undergo a more involved surgical procedure or prefer to try a less invasive option.

Unlike the traditional laminectomy, which requires the cutting away of a small amount of bone, the X-Stop® does not result in the destruction of any bone. “With a laminectomy, there is a small risk of creating instability, and fusion may be required to correct that instability,” Dr. McPherson says. “With the X-Stop, there is no risk of instability or the need for subsequent fusion.”

Published studies have shown that 70 to 80 percent of patients with lumbar stenosis who undergo the X-Stop® procedure experience significant improvement of symptoms. If the procedure does not provide relief, a laminectomy remains an option.

The procedure, approved by the U.S. Food and Drug Administration in 2005, is covered by Medicare, but private insurers continue to regard it as experimental, which means that younger patients who wish to have the procedure must pay the expense out of pocket.

Neurocritical care program among the best

If you or a loved one is destined to spend time in the neuroscience intensive care unit (NSICU) at University Hospital, you can take comfort in knowing that this is a premier facility. In May the United Council for Neurologic Subspecialties re-accredited the Neurocritical Care Fellowship Training Program, based in the NSICU, for five years. Only 30 other U.S. institutions have achieved this designation.

The neurocritical care program forms a backbone of support for Mayfield patients who are recovering from surgery of the brain or spine at University Hospital. The 20-bed NSICU is staffed 24 hours a day by highly trained physicians and nurses. Its state-of-the-art technology includes:

- A portable CT scanner, which eliminates the risks associated with transporting patients to other parts of the hospital for procedures.
- Advanced monitoring of critical values in the brain, such as brain oxygen levels and brain blood-flow levels.
- An endovascular cooling device to protect the brain in patients who have suffered cardiac arrest.
- Continuous, 24-hour EEG monitoring for seizures, which can have a negative impact on recovery and can last far longer than previously realized.



Running in all directions

Running enthusiasts affiliated with the Mayfield Clinic have been busy raising awareness about neurological disease and setting an example as spine athletes – people who take care of their spine by exercising, maintaining strong core muscles, and eating healthfully.

- Jed Hartings, PhD, above left, Director of Clinical Monitoring for the Mayfield Clinic, completed the “Boston to Big Sur Challenge,” running two marathons on two coasts in 13 days. His combined time of 6:49:27 placed him 60th among 351 runners who competed in both events. Dr. Hartings, who serves on the Organizing Committee of Vasospasm 2011 (see page 4), wore a shirt bearing the event’s logo (designed by Mayfield Art Director Tonya Hines).
- John DePowell, MD, above right, a sixth-year resident in UC’s Department of Neurosurgery, ran his third full Flying Pig Marathon (and his fifth marathon overall). Dr. DePowell is a graduate of Kenyon College and UC’s College of Medicine.
- Gary Smith, above center, a Mayfield Spine Athlete and former patient of Mayfield’s William Tobler, MD, walked the Flying Pig half-marathon while sporting a Mayfield Education and Research Foundation T-shirt. Gary owes his current fitness to three anterior cervical discectomy and fusion (ACDF) procedures, at C5-C6, in 1998, at C4-C5 in 2000, and at C6-C7 in 2001.

VASOSPASM 2011

11th International Conference on Neurovascular
Events after Subarachnoid Hemorrhage

Mayfield leads effort to cure tragic stroke complication

Cerebrovascular experts from 18 countries and six continents gathered in Cincinnati this summer to discuss the science and clinical management of vasospasm, a life-threatening complication of subarachnoid hemorrhage, while working toward an ambitious goal: creation of the first set of guidelines in neurocritical care for the treatment of patients who have suffered a subarachnoid hemorrhage, or bleeding stroke.

The Mayfield Clinic, University of Cincinnati Department of Neurosurgery, and UC Neuroscience Institute hosted the international Vasospasm 2011 conference at the Hilton Cincinnati Netherland Plaza in July. Previous sessions were held in Istanbul, Sydney, and Tokyo.

Mario Zuccarello, MD, Frank H. Mayfield Professor and Chairman of the Department of Neurosurgery, and Joe Clark, PhD, Professor of Neurology, co-chaired the event, which was sponsored by the Mayfield Education and Research Foundation.

Vasospasm (pronounced VAY-zoh-spasm) is a sudden spasm of a blood vessel, an event that occurs frequently after a ruptured aneurysm and can lead to permanent brain damage or death. Occurring after the initial brain injury – sometimes when a patient appears to be getting better – it can create a heartbreaking turn of events for family members.

An optimal clinical management strategy has yet to be established.

The best way to prevent vasospasm is to prevent a brain aneurysm from rupturing or from developing in the first place. Those at risk of harboring dangerous aneurysms include people who:

- have two first-degree family members who have suffered a ruptured brain aneurysm
- smoke, drink excessively, or suffer from hypertension (a smoker is 4.5 times more likely to suffer a bleeding stroke than a nonsmoker)
- suffer from disorders of the arteries, including fibromuscular dysplasia and polycystic kidney disease
- are between 50 and 60 years of age

The Mayfield Clinic urges people who have family members with aneurysms, or who know they harbor small aneurysms of their own, to stop smoking to reduce the risk of enlargement and/or the development of the aneurysm. In addition, screening with MR angiography or CT angiography is strongly advised for anyone who has two first-degree family members who have experienced a ruptured aneurysm.

With Doc's help, event funds brain tumor initiative

Darrell "Doc" Rodgers, the realtor and host of 700WLW's "Extra Innings" who has been treated for metastatic brain tumors, spoke at a recent winetasting fund-raiser, which raised money for an educational alcove that will be located at a UC Brain Tumor Center treatment site for the benefit of patients and family members.

Doc, a non-smoker and former baseball pitcher, had been suffering from undiagnosed lung cancer for some time when a headache that "felt like a nail in the middle of my head" forced him to the hospital and, ultimately, a diagnosis. Treatment for the metastasis and lung cancer began immediately. "My brain tumor may have saved my life," he reflected. Doc closed his remarks by reading a message from a fortune cookie that he keeps with him: "Your cheerful outlook is one of your assets."



Ronald Warnick, MD, Chairman of the Mayfield Clinic and Medical Director of the UC Brain Tumor Center, gives Doc Rodgers a warm welcome. Photo by Dave Collins / UC.

Dr. Yeh retires

After decades of service to the Mayfield Clinic, Hwa-shain Yeh, MD, retired at the end of June. Dr. Yeh, a native of Taiwan who joined Mayfield and the UC faculty in 1983, specialized in epilepsy surgery and also treated patients who suffered from brain tumors and spinal disorders. In 2004 the Cincinnati Business Courier recognized Dr. Yeh and his team at the UC Neuroscience Institute with the Health Care Heroes Innovator Award for their work with epilepsy patients. “While it is difficult to say goodbye to a valuable member of our team, we are happy for Dr. Yeh and wish him well in his retirement,” said Mayfield Chairman Ronald Warnick, MD. “We have been privileged to work with this superb neurosurgeon, who has touched and improved the lives of thousands of individuals.”

Dr. Yeh (right) operates with former neurosurgery resident Andrew Grande, MD (left).



(left-right) Event Co-Host John M. Tew, MD, ANA Founder Ginny Fickel Ehr, ANA Executive Director Judy Vitucci, and ANA Board President Amy Pack

Acoustic neuroma in the spotlight

The Acoustic Neuroma Association’s 20th National Symposium, which drew support group leaders from 26 states to the Cincinnati Hilton Netherland Plaza, June 17-19, was an inspiration for patients as well as the Mayfield Clinic and UC Brain Tumor Center team, which hosted the event with UC Health.

The retreat-like weekend offered more than 50 lectures and workshops, as well as one-on-one consultations about acoustic neuroma, a benign but challenging brain tumor that arises in the inner ear. Mayfield presenters included John M. Tew, Jr., MD, Philip Theodosopoulos, MD, Ronald Warnick, MD, and Nancy McMahon, RN.

An acoustic neuroma can lead to single-sided deafness, tinnitus (ringing in the ears), and balance problems. Hearing loss can occur with or without treatment, while loss of facial function can occur if the facial nerve suffers damage during surgery. “An acoustic neuroma is a chronic disease,” Dr. Theodosopoulos said in one of his presentations. “You will have it, or its effects, for the rest of your life.”

That fact underscored the value of the symposium and the ANA’s national constellation of support groups. “This remarkable event will not be soon forgotten,” said Dr. Tew, an event co-host. “I have been deeply moved by the strength of individuals affected by acoustic neuroma and by their eagerness to learn more so that they can help others who are newly diagnosed. We are all enriched by their perseverance.”

The 2013 symposium will be hosted by the House Ear Clinic in Los Angeles.

Dr. Keller honored

The Mayfield Clinic and Department of Neurosurgery surprised Jeffrey T. Keller, PhD, Associate Director of the Neurosurgery Residency Training Program, with an honor of a lifetime during graduation exercises for neurosurgery residents on June 3. The honor, spearheaded by the Mayfield Education and Research Foundation, was the creation of the Jeffrey T. Keller Lectureship in Education and Surgical Anatomy. The endowment will fund an eminent guest speaker each year.

Department Chairman Mario Zuccarello, MD, praised Dr. Keller as “a pioneer” in

the training of neurosurgical residents in surgical anatomy and surgical procedures through the use of human cadavers.*

“I am not sure that I deserve this, but I will graciously accept it,” said a visibly moved Dr. Keller, Director of the Goodyear Microsurgery Laboratory. “Sammy Sosa famously said, ‘Baseball been berry, berry good to me.’ Borrowing from the simple purity of that sentiment, but without the Dominican Spanish accent, I would say that neurosurgery has been very, very good to me. I’ve had 35 years of reward working with residents, faculty, and staff.”

** More than 350 people donate their bodies to UC each year. When research is complete,*



Jeffrey Keller, PhD (right) with Alumnus Lecturer Hans-Jakob Steiger, MD, PhD, at the 2011 resident graduation exercises

the cremated remains are interred at a plot at Spring Grove Cemetery, which is marked with the inscription, “Through Their Thoughtfulness Knowledge Grows.” The donors are honored publicly during an annual memorial service.

The Standard



Andaluz

Welcome, Dr. Andaluz!

The Mayfield Clinic is pleased to welcome Norberto Andaluz, MD, to our neurosurgical team. Dr. Andaluz, a native of Argentina, is an expert in minimally invasive cranial and spine surgery, skull base surgery, and the treatment of traumatic brain injury, cerebrovascular disease, brain tumors, carpal tunnel syndrome, and ulnar nerve neuropathy. He will see patients at the Medical Arts Building on the University of Cincinnati Academic Health Center campus and will perform surgery at University Hospital and the Veterans Affairs Medical Center. Dr. Andaluz will serve as Director of Neurotrauma for the UC Neuroscience Institute.

Eco-friendly

To receive your Mayfield Standard by e-mail as a PDF rather than on paper, please call Jillian at 513.569.5354. You can review current and past issues at www.mayfieldclinic.com/mc_newsletter/standard.htm



Upcoming events

Sunflower Revolution Parkinson's Disease Symposium & Expo

A free educational event for patients, families & caregivers

Saturday, September 10, 2011, Oasis, Loveland, Ohio
Call 866.941.UCNI (8264)

Beacon of Hope Weekend

Midwest Regional Brain Tumor Patient Symposium

A free educational event for patients, families & caregivers

Saturday, October 1, 2011, 8 a.m.-4 p.m.; Westin Hotel
Call 513.558.8642 or contact kirsten.holloway@uchealth.com

Walk Ahead for a Brain Tumor Cure Fundraiser

Sunday, October 2, 2011; 8-11:30 a.m.
5K Run begins at 8:40 a.m.; 5K Walk at 9 a.m.
Visit www.walkahead.org or call 513.558.6112

For a listing of all Mayfield events, visit www.mayfieldclinic.com

