



Neuro Update

October 2009

Bronson Offers More Minimally Invasive Neurological Surgery Options

Minimally invasive surgical (MIS) techniques in neurosurgery have greatly improved outcomes for patients by requiring less invasive surgical intervention and improving patient recovery times. MIS success can be attributed to advancements in operating microscope technology and instruments, including imaging and computer navigation technologies. MIS technology allows surgeons to pinpoint the least damaging route to operative sites, which reduces surgical trauma to their patients.

“Minimally invasive brain and spine surgical procedures are relatively new,” says Alain Fabi, MD, Administrative Director of Neurosurgery at Bronson.

Compared to traditional open surgery, benefits of MIS procedures include:

- Less trauma to the body
- Less blood loss in surgery
- Smaller surgical scars
- Decreased length of hospital stays
- Reduced pain and need for pain medications after surgery
- Faster return to normal activities



“This is due to the complexities of the brain and spine, and to recent advancements in technology. The visualization and localization are better than they have ever been. *(continued on page 3)*”

Bronson's neurosurgeons are Dr. Alain Fabi, Dr. Bratislav Velimirovic, Dr. Gregory Wiggins and Dr. Daryl Warder.

See the case study on the back page highlighting minimally invasive brain surgery in a pediatric patient.

Introducing the Newest Members of Our Neurosurgery Team

Bronson Methodist Hospital welcomes Alain Y. Fabi, MD and Gregory C. Wiggins, MD to its medical staff. Drs. Fabi and Wiggins join the Bronson Neurosurgery team of Bratislav Velimirovic, MD, PhD, Daryl Warder, MD, PhD, Jason Peterman, PA-C, Vie Saylor, PA-C, and Emily Yonker, PA-C.

Specializing in minimally invasive brain and spine surgery, Dr. Fabi is a board certified neurosurgeon who provides diagnosis and treatment of disorders or injuries to the brain, spine or peripheral nerves. His additional interests include deep brain stimulation and stereotactic frame surgery. Dr. Fabi has been practicing in southwest Michigan since 2000.

Dr. Fabi completed his residency in neurological surgery and internship in general surgery at the Mayo Clinic. He received his medical degree from Wayne State University School of Medicine, master's degree from Wayne State University, and bachelor's degree from Albion College.

Dr. Wiggins is a board certified neurosurgeon whose special interests



Alain Fabi, MD



Gregory Wiggins, MD

include complex spine/deformity, peripheral nerve, minimally invasive brain and spine surgeries, and intracranial endoscopy. He completed his orthopedic and neurosurgical spine fellowship at the University of Washington, and a peripheral nerve surgery fellowship at Louisiana State University. He completed his residency in neurosurgery at Henry Ford Hospital and Children's Hospital of Michigan, and internship in general surgery at Henry Ford Hospital. Dr. Wiggins received his medical degree from Indiana University School of Medicine and bachelor's degree from DePauw University.

Neurological surgeries performed by Drs. Fabi and Wiggins, and the neuro-

surgery team at Bronson, include the most advanced minimally invasive surgery techniques to treat brain tumors, vascular disorders and spinal and peripheral nerve problems.

To schedule a referral, call (269) 341-7500.

Locations

Bronson Neurosurgery (Kalamazoo)

601 John Street, M-124
Kalamazoo, MI 49007
(269) 341-7500 Fax: (269) 341-7540

Bronson Neurosurgery (Paw Paw)

451 Health Parkway
Paw Paw, MI 49079
(269) 341-7500 Fax: (269) 341-7540

Bronson Neurosurgery (Battle Creek)

363 Fremont Street, Suite 200
Battle Creek, MI 49017
(269) 964-5820 Fax: (269) 341-7540

Bronson Neurosurgery (Marshall)

215 East Mansion Street
Marshall, MI 49068
(888) 258-0875 Fax: (269) 341-7540

Bronson Scores High Marks for Stroke Care

The American Heart Association and American Stroke Association recently recognized Bronson with a **Get With The GuidelinesSM** (GWTG) Silver Performance Award for consistently following treatment guidelines to improve quality of care for stroke patients. To receive the GWTG Silver Award, Bronson followed treatment guidelines in seven key measures at least 85% of the time for 12 consecutive months.

Bronson scored higher than the minimum of 85% on seven key measures: including aggressive use of medications like clot-busting t-PA, cholesterol-lowering drugs and anti-coagulants, as well as education for controlling stroke risk factors.

Bronson Methodist Hospital is one of only three hospitals in the state to be recognized.

Bronson Dedicates Neuro Critical Care Unit

The Trauma/SICU/Burn unit on the first floor of the BMH South Campus is getting a new name. The new name is the Critical Care Units with dedicated sections for trauma, surgical, neuro and burn patients.

This name change reflects the conversion of 9 beds that are dedicated to critically ill neurological patients. The nursing and support staff on the Neuro Critical Care Unit (NCCU) have received rigorous special training for the care of complex neurological cases where patient management is crucial to good outcomes.

For more information about the Neuro Critical Care Unit, please contact Mary Hood at (269) 341-8952.

Memory Clinic Offers Evaluation and Treatment for Older Adults with Cognitive Disorders

Bronson LakeView Memory Clinic offers comprehensive outpatient evaluation and treatment for those suffering from any kind of memory loss. This clinic, the first of its kind in southwest Michigan, provides education, resources and support services for caregivers, family members, medical professionals and the region.

“Early diagnosis is critical to the long-term well-being of those with memory difficulties,” says Nadeem Mirza, MD, medical director of Bronson LakeView Memory Clinic. “Primary care physicians and some specialists may not have the time or resources to evaluate and treat complex memory disorders. We can provide comprehensive evaluation and treatment of these patients, including education and support for family mem-

bers and caregivers—all while providing timely communication and follow-up with referring physicians.”

For more information or to refer a patient, call (269) 657-1471.

About Dr. Mirza

Nadeem Mirza, MD, a physician with Bronson LakeView Family Care, is medical director of the Bronson LakeView Memory Clinic and Bronson LakeView Hospital's Behavioral Health Services unit. He specializes in the psychiatric care of older adults, providing care for inpatients at Bronson LakeView Behavioral Health and outpatients at Bronson LakeView Psychiatry. Dr. Mirza is board certified in psychiatry and geriatric psychiatry. He received his medical degree from Punjab University in Lahore, Pakistan. He completed his residency in psychiatry at the University of Connecticut and the National Institutes of Health; and completed a joint fellow-



Nadeem Mirza, MD

ship in geriatric psychiatry at the National Institutes of Mental Health/ Johns Hopkins Suburban Hospital Healthcare System in Bethesda, MD.

Memory clinic offers:

- Diagnosis, treatment and follow-up
- Cognitive testing and evaluation
- Inpatient behavioral health services
- Coordination of services and family support provided by an interdisciplinary team
- Referral to other specialists and residential options, as needed
- Counseling with a medical social worker for patients, caregivers and families

Epilepsy Monitoring Unit Now Open

Bronson's Epilepsy Monitoring Unit (EMU) opened in August 2008 and is the only EMU serving southwest Michigan. The purpose of the EMU is for patients of all ages with seizures to spend several days under intensive evaluation by Bronson neurological specialists in order to develop treatment plans. Bronson's specialized neurological team, including the area's only epileptologist, staff the



Hisanori Hasegawa, MD

unit. For more information or to make a referral, call Bronson Neurological Services at (269) 341-7500.

Bronson Now Offers Percutaneous Fusion Surgery

Patients with severely debilitating back pain now have a minimally invasive option at Bronson for what is often a last resort — fusing the vertebrae.

“In the past, when vertebral fusion was necessary, it required open surgery,” says Bronson’s neurosurgery medical director, Bratislav Velimirovic, MD. But Dr. Velimirovic now performs the procedure percutaneously, which dramatically reduces muscle and tissue impact, causes less bleeding, reduces post-operative pain, shortens hospital stays and can speed recovery time.

“Patient selection is critically important. It is not for every patient. But when it is necessary, it can provide the appropriate results,” Dr. Velimirovic explains. He estimates that, of the more than 90 percent of the population that experiences back pain, only a fraction require surgery. Still fewer require fusion. Pain management and other non-surgical options are always a first step.

Other surgical candidates may include patients with degenerative disc disease or instability of the spine due to a fracture.

And though fusion limits the patient’s movement, Dr. Velimirovic says it is often no more limiting than the patient’s pre-operative range. But vertebral fusion remains a last resort. In many cases a less radical and more common solution — though still major surgery — is disc decompression. In this procedure, a small portion of the bone or disc may be pressing on a nerve root and is removed to alleviate pressure or decompress the disc. It, too, can be performed through minimally invasive procedures at Bronson, Dr. Velimirovic says.

“There are many options now available to treat neurovascular and neurospine disorders through minimally invasive techniques,” Dr. Velimirovic says, adding,



Bratislav Velimirovic, MD

“Our team is committed to offering the most advanced neuro surgical care in the region.”

For more information or to refer a patient, call (269) 341-7500.

Minimally Invasive Neurological Surgery Options

(continued) We can treat pituitary tumors with endoscopes and literally go in through the nostrils of the nose rather than making bigger, more invasive approaches through the lip.”

Minimally invasive neurosurgery procedures being performed at Bronson include:

- Cranial and Skull Base Surgery
- Carotid Angioplasty
- Endoscopic Resection of Pituitary Brain Tumors
- Endovascular Treatment of Intracranial Aneurysms and Carotid Occlusive Disease
- Percutaneous Spine Fusion
- Stereotactic Neurosurgery (brain surgery guided by three-dimensional images from CT or MRI scans)
- Stereotactic Radiosurgery for Brain Tumors
- Transsphenoidal Surgery (surgery performed through the nostrils)
- Treatment of Herniated Lumbar and Cervical Disks
- Treatment of Hyperhidrosis of the Hands
- Volumetric Stereotactic Resection of Brain Tumors

Neuro Team Collaboration

A central component of the Bronson Neurosurgery Program is a comprehensive team approach that encourages input from a broad array of medical specialties and services, including neurology, epileptology, physiatry, oncology, neuroradiology, orthopedics, otolaryngology, physical therapy, rehabilitation and more. Bronson neurosurgeons work with other providers, patients and families to best meet patients’ individual needs. Call (269) 341-7500 to refer a patient to one of our four convenient locations.

Percutaneous Spinal Fusion Gives Woman New Lease on Life

Nearly 40 years ago, a motorcycle accident seriously injured Helen Atherton. After years of suffering, neck surgery and surgery for ruptured discs in her back, she was still in excruciating pain — until six months ago when Dr. Velimirovic fused the L-4, L-5 and S-1 vertebrae in her back percutaneously.

“I feel like I’d lost my life but now I’m getting it back. I walked around with that pain for so many years... I tried everything. I was really at a low point. I wasn’t sure how I was going to go on,” she says.

Before fusion surgery, Dr. Velimirovic tried a series of alternative solutions that included pain management and spinal cord simulation. When Helen failed to respond, he proposed fusing the vertebrae.

“I didn’t think I had anything to lose,” Helen says. “Now I feel like God reached down and helped me. Dr. V’s my hero.”



Helen Atherton, in hydrotherapy, is thankful for Dr. Velimirovic’s expertise.

Case Study: Breakthrough Minimally Invasive Pediatric Brain Tumor Treatment

A 16-year-old patient complained of headaches to Alain Fabi, MD, a neurosurgeon with Bronson Neurosurgery, but the patient otherwise showed no signs of neurological deficits. A CT scan and MRI analysis revealed a lesion on the left side of his skull which had eroded through the bones of the front portion of the skull and into the patient's nasal passages. The patient's sense of smell was not affected. Biopsy of the tumor identified it as a large dermoid tumor, measuring 4.5 by 3.1 cm.

Dr. Fabi recommended to the patient and his family that surgical resection was the best course of therapy for this type of tumor. Typically, to remove a tumor in this location of the brain, the surgeon would need to split open the patient's head from ear to ear, peel back the skin from the face and saw off the top portion of the skull to reach the tumor. This surgery requires long recovery times and often requires reconstructive cosmetic surgery.

Dr. Fabi enlisted the expertise of Steven Szeles MD, an otolaryngologist with HealthCare Midwest ENT/Head and Neck Surgery, in Kalamazoo. Together, they traveled to the University of Pittsburgh to learn a new minimally invasive technique called expanded Endoscopic Endonasal Approach (EEA). This procedure allowed the dermoid tumor to be removed through the nose without any visible



This pre-op MRI shows the location of the patient's tumor.

incisions. To remove the tumor, the surgeons inserted instruments through the nose to drill through the bottom of the skull, which created a thumbnail-sized hole and access into the lower part of the brain.

Drs. Fabi and Szeles performed EEA on the patient. The tumor was completely removed during the six-hour surgery and was found to be benign. The patient was sent home the next day following surgery and no further treatment is necessary for the patient.

EEA offers patients several benefits compared to open craniotomies (see box). In addition, EEA allows patients with malignant tumors to begin chemotherapy or radiation sooner without waiting for incisions to heal.

"Using miniature surgical instruments and drills developed by Stryker Inc., of Kalamazoo, we now have access to



This post-op MRI shows the results of the minimally invasive EEA procedure.

Benefits of Endoscopic Endonasal Approach:

- No incisions to heal
- No disfigurement to the patient's skull or face
- Faster recovery — days, compared to weeks with an open procedure
- Shorter hospital stay, usually within two or three days
- Fewer, if any, lingering side effects
- Reduced risk of neurological deficits associated with manipulating the brain

areas of the brain that we never before dreamed possible under these minimally invasive conditions," says Dr. Fabi. "Any procedure or technique that allows us to reach vital areas of the brain in a less invasive and safer way is certainly going to be a great advance for our patients and for our specialty."