



Cerebral Embolization Gives Patient New Life

Standard treatments for brain aneurysms can often require removing part of the skull to seal the aneurysm with a platinum clip. An alternative option uses platinum wiring, but large aneurysms that have an irregular shape or are located in hard-to-reach parts of the brain can be a challenge with these treatments.

A new variation of cerebral embolization is being utilized by the University of Miami's Neurological Surgery Department in conjunction with Jackson Memorial Hospital. This innovative method threads a catheter into the brain of the patient and slowly injects a liquid polymer, which immediately turns into a solid. Once the aneurysm is blocked off, the blood flow returns to normal.

This procedure recently impacted the life

"The aneurysms were close to her optic nerves and in a dangerous location, and we didn't want to risk damaging her vision when we now have a less invasive option," said Dr. Sultan.

of Carmen Graff, a Florida resident who learned she had two brain aneurysms during diagnostic fertility testing. If either one had burst, there was a high probability for immediate stroke.

Like many patients, Graff was entirely unaware of her condition. Aneurysms, which create a weakness in the blood vessel wall, have little or no symptoms. Statistically, aneurysms have a 75 percent chance of being life threatening upon diagnosis.

After learning the news, Graff who was visiting the doctor solely to seek assistance regarding her inability to become pregnant, was very distraught. Graff also recalled that an aneurysm had killed her mother at age 53.

Graff's neurologist in Port St. Lucie, FL quickly recommended that she seek the care of the University of Miami's neurosurgeon and director of neuroendovascular surgery, Ali Aziz-Sultan, M.D. Dr. Sultan immediately took her case, knowing she was an ideal candidate for cerebral embolization.

"The aneurysms were close to her optic nerves and in a dangerous location, and we didn't want to risk damaging her vision when we now have a less invasive option," said Dr. Sultan.

Graff's procedure was extremely positive. "The outcome was excellent," says Dr. Sultan. "Carmen is definitely a success story. This



Dr. Ali Sultan gives patient Carmen Graff second chance with cerebral embolization.

procedure is another major advancement in our ability to treat aneurysms, and Jackson Memorial is one of the few facilities in the U.S. to offer this procedure."

Graff was given a second chance and felt immediately impressed to reciprocate this gift. Graff, still unable to conceive, utilized her four-day stay in the hospital to adopt baby Tyler Patrick with her husband Kevin.

Thanks to the expertise of Dr. Sultan and the breakthrough of cerebral embolization, Carmen Graff recently passed her six-month check-up and angiogram with a clear bill of health.

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NeuroFocus is produced by the Departments of Neurological Surgery and Neurology at the University of Miami's Miller School of Medicine in affiliation with Jackson Health System.

Jackson
HEALTH SYSTEM



Clinical Trials

Neurological Surgery

Acute Spinal Cord Injury

A grant proposal has been submitted to the NIH for a randomized, prospective, multicenter Phase III clinical trial to investigate the beneficial effects of moderate hypothermia (cooling the body to 33.0 C) following an acute cervical spinal cord injury. The grant proposal is for \$10 million. Based upon Dr. Levi's pilot (Phase I) safety trial, it is believed that this intervention may be of benefit for Neuroprotection after these devastating spinal cord injuries.

-Michael Wang, M.D., F.A.C.S.

Traumatic Brain Injury

The DOD recently awarded the department of Neurosurgery, at The University of Miami, a \$2.2M CDMRP award, to perform a clinical phase IIA randomized trial of Oxycyte, in severe TBI, which will commence during 2010, subject to an FDA IND. A new 3rd generation Perfluorocarbon (PFC), Oxycyte, is being used to dissolve 40 ml of oxygen per 100ml, compared to approx.3.5 ml, for whole blood. The small particle size of this PFC (~3 microns) makes it especially attractive in CNS injury, and ischemia, where capillary narrowing, due to astrocyte swelling, is a major limiting factor for oxygen delivery. Animal model TBI studies and a "proof of concept" severe human TBI study have shown better outcomes, tissue oxygenation, and neurochemical profiles, after PFC, than in controls.

-Ross Bullock, M.D., Ph.D.

For more information on Neurological Surgery clinical trials please call 1-800-996-3783

Neurology

Normal Pressure Hydrocephalus: Cognitive Recovery

Normal Pressure Hydrocephalus (NPH) is characterized by disturbances in gait, urinary function and cognition that affects 1 in 200 adults over the age of 50 and is often treated with the insertion of a ventriculoperitoneal (VP) shunt. This NIH-sponsored study examines the pattern of cognitive recovery in NPH following placement of an adjustable shunt. The rate of improvement of different neuropsychological skills and the extent to which post-operative shunt pressure adjustments contribute to better cognitive and functional outcome will be examined.

-Heather Katzen, Ph.D.

Small Subcortical Strokes

Small subcortical strokes, or lacunar strokes, account for up to 1 in 4 strokes and affect Hispanics and African Americans more commonly. This study, focusing on the Secondary Prevention of Small Subcortical Strokes (SPS3), is a multicenter NIH-sponsored trial evaluating two interventions: determining whether aspirin plus clopidogrel is superior to aspirin alone and evaluating if very aggressive blood pressure control is superior to usual blood pressure management. Patients with small subcortical strokes within 6 months of the event are eligible to participate.

-Jose Romano, M.D.

SENTIS Acute Stroke

The Safety and efficacy of Neuroflo™ for treatment of Ischemic Stroke (SENTIS) clinical trial provides an interventional treatment alternative beyond the 8 hour window for FDA approved devices. The trial is based on initial promising results from the pilot phase showing safety of using partial abdominal aortic occlusion using the double balloon NeuroFlo catheter with the anticipated benefit via increasing brain perfusion.

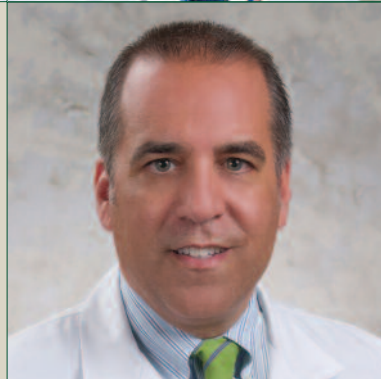
-Dileep Yavagal, M.D.

For more information on Neurology clinical trials please call 1-877-977-7724

Greetings From the Chairs of Neurological Surgery and Neurology



Top Left: Dr. Barth Green,
Chair of the Department
of Neurological Surgery
Top Right: Dr. Roberto Heros
Co-Chair of the Department
of Neurological Surgery
Right: Dr. Ralph Sacco,
Chair of the Department
of Neurology



Dear Colleagues:

We, the Departments of Neurological Surgery and Neurology from the University of Miami Miller School of Medicine, are proud to introduce you to our new co-departmental newsletter *NeuroFocus*. In partnership with our affiliated hospitals Jackson Memorial, University of Miami Hospital, and the Miami VA Medical Center, we are traveling on a path of unprecedented growth and discovery in the arenas of basic and clinical neuroscience. This newsletter will provide updated information regarding our latest innovations relating to patient care procedures, translational research and educational programs.

Our joint mission is three-fold:

1) to advance the neurological health of our community while providing quality care for patients who seek our services in South Florida, nationally and internationally; 2) to create a new body of knowledge on various topics of neurological diseases and injuries which will result in translational research leading to a change in the way we treat our patients both medically and surgically; 3) to create educational curriculum and programs which will provide the best possible training to our residents and fellows in both medical and surgical neurology. Our extensive collaborative efforts and programs result in a unique combination of talents that have enabled our faculty and departments to be ranked among the best and attract both students and patients from around the world.

The Department of Neurological Surgery is renowned for its innovative treatment of complex spinal and brain disorders and injuries. It is home to the world famous Miami Project to Cure Paralysis, where cutting edge research is being conducted to discover effective treatments for spinal cord injury and other neurological injuries and diseases. The Department of Neurology is well-known for basic and clinical research in stroke, mitochondrial disorders and neurodegenerative diseases. The department features several high profile programs including the Evelyn McKnight Center for Cognitive Disorders, a National Parkinson's Foundation Center of Excellence, the Kessnich Family ALS Center and is the administrative center for the Northern Manhattan Study.

U.S. News and World Report ranked our collaborative program as one of the top in the nation. The success of our "joint venture" is further enhanced by the interdisciplinary collaborations of world class neuro-radiologists, neuro-pathologists, neuro-oncologists, neuro-ophthamologists and every other specialty of medicine necessary to provide comprehensive multi-disciplinary care in the most effective and holistic manner. This team of physicians, scientists, nurses and allied health professionals work in one of the nation's largest and busiest, but most importantly, highest quality medical centers. We are excited to use this new publication to share the energy and knowledge that inspires us to achieve excellence.

Sincerely,

Barth A. Green, M.D., F.A.C.S.
Professor and Chairman of
Neurological Surgery

Roberto Heros, M.D., F.A.C.S.
Professor and Co-Chairman of
Neurological Surgery

RALPH L. SACCO, M.S., M.D., F.A.A.N., F.A.H.A.
PROFESSOR AND CHAIRMAN OF
NEUROLOGY

Residents at the Top of Their Game: Congress of Neurological Surgeons SANS Challenge

Chief residents, Drs. Hamad Farhat and Ted Brindle, took home second place and \$1500 at the 2009 Congress of Neurological Surgeons (CNS) Resident SANS Challenge. Held on October 24-29 in New Orleans, LA, the contest consisted of three rounds that tested physicians in residency on their neurosurgery knowledge. All applicants first participated in a preliminary online qualification round, after which nine out of the thirty programs were selected. The live championship included other top tier universities such as Columbia University, Vanderbilt University Medical Center and the Mayo Medical Center. According to Dr. Farhat, “the competition was tough but we came ready. It is a great feeling to know that what we have been taught at Miami has fully prepared us to compete with other top ranked programs”.

In addition to the Residency Challenge, the 2009 CNS Conference focused on exemplifying ‘A Culture of Excellence’ through the field of neurosurgery. Featured speakers included Dr. James Rutka, a leader in both pediatric neurosurgery and neurosurgery in Canada and worldwide. The program also gave residents an opportunity to attend educational courses on topics such as 3-D Anatomy and Emerging Technologies in the Treatment of Neurotrauma.

The CNS Conference is just one of the many opportunities the University’s residents can take advantage of as part of their comprehensive training experience.

Drs. Hamad Farhat and Ted Brindle clenched second place at the annual Congress of Neurological Surgeons (CNS) Resident SANS Challenge.



Acute Endovascular Therapy for Stroke with Dramatic Reversal of Hemiplegia

Stroke is the third leading cause of death and primary cause of serious, long-term disability in the United States each year. Statistics show that someone suffers a stroke every 45 seconds, and someone dies of a stroke every 3.1 minutes. Stroke can happen to anyone at any time, regardless of race, sex or age.

Ejaz Lodhi, a 51 year old Miami businessman, was at home watching television this past spring when he had an acute stroke. He suddenly lost sensation and strength in the left side of his body but was able to slowly walk to a neighbor’s home. His speech was slurred and his breathing strained, but he managed to tell his neighbor to call 911.

“But we now have treatments that can reverse stroke in the first few hours.”

When fire rescue arrived, Lodhi was rushed to Jackson Memorial Hospital, the only hospital in Miami-Dade County designated as a Comprehensive Stroke Center by the Florida Agency for Health Care Administration – and one of only 15 in the state. Jackson operates in conjunction with neurologists from the University of Miami’s Miller School of Medicine to treat stroke patients 24 hours a day, seven days a week, using clot-busting medication and advanced catheter-based treatments.

“Stroke is painless, so people’s reaction to it is much more subdued,” said Dileep R. Yavagal, M.D., Director of Interventional Neurology at the



Ejaz Lodhi, a stroke patient, was saved using a stent-assisted balloon angioplasty performed by Dr. Dileep R. Yavagal.

University of Miami Leonard M. Miller School of Medicine and at Jackson Memorial.

“But we now have treatments that can reverse stroke in the first few hours.”

When Lodhi arrived at Jackson Memorial’s ER approximately 4 hours from symptoms onset,

Dr. Yavagal was able to immediately make a diagnosis of acute occlusion of the cavernous segment of the right internal carotid artery on MR Angiography as the cause of the stroke symptoms. Taking his patient immediately to the Neuroendovascular Angiography Suite, Dr. Yavagal performed a stent-assisted balloon angioplasty to revascularize the acutely occluded right ICA .

The results were immediate and dramatic. Lodhi, who by that time was completely hemiplegic on his left side from the stroke, was able to move his entire body as soon as the procedure was complete. He was walking later that night and walked out of the hospital within a few days. Without the emergency treatment, he likely would have remained paralyzed and in need of rehabilitation.

Dr. Yavagal says that preventive strategies such as smoking cessation, blood pressure control and treatment for metabolic syndrome, avoidance of excessive alcohol drinking and control of cholesterol levels remain our first line of defense against stroke.

That advice has become a way of life for Ejaz Lodhi, who is almost fully recovered. He quit smoking, exercises regularly and eats three healthy meals a day.

“I have to take care of myself,” he said. “I’m not going to let stroke control my life.”

NeuroFocus

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In The News

XIV World Congress of Neurological Surgery

Dr. Roberto Heros, the Department of Neurological Surgery's Co-Chair, served as this year's President of the World Congress of Neurological Surgery. The conference's Scientific Program Committee was chaired under the leadership of Dr. Jacques Morcos, Professor of Clinical Neurological Surgery at The University of Miami. The event, which took place in Boston, MA, on August 20 – September 4, 2009, provided a forum for the presentation of the latest in scientific work related to neurosurgery.

Dr. Green Awarded AXA Advisors Lifetime Achievement Award

The AXA Advisors Lifetime Achievement Award is designed to honor an individual, who, over his/her lifetime, has made a significant impact or changed history in the health care industry in South Florida. The winner for 2009 was Neurological Surgery Department Chair, Dr. Barth A. Green.

Dr. Ralph Sacco Named National President of the American Heart Association

The Chairman of Neurology, Dr. Ralph Sacco, was elected national president of the American Heart Association (AHA) for the term beginning in July of 2010. He is the first neurologist ever chosen to serve in this distinguished position. He was the lead author on the AHA's most recent stroke prevention guidelines for patients who have already suffered a stroke or a transient ischemic attack (TIA). Dr. Sacco has previously received the AHA's Chairman's Award in 2007 and the prestigious William Feinberg Award for Excellence in Clinical Stroke in 2006.

What's Next

University of Miami to Host Annual Society of University Neurosurgeons (SUN) March 21st-24th, 2010

The 45th annual SUN meeting will be hosted by Drs. Jacques J. Morcos and Michael Y. Wang on behalf of the University of Miami, Leonard M. Miller School of Medicine. This members-only meeting of leaders in the field of Neurological Surgery will include an exciting program of academic discussion, scientific presentations, and scholarly lectures from experts in the fields of arts and sciences.

Neurology Update and Stroke Intensive 2010 February 18-20, 2010 at The Alexander Hotel - Miami Beach, FL

Neurology Update and Stroke Intensive 2010 is designed to provide clinicians with the most recent developments in the diagnosis and management of neurologic disorders, including stroke. The target audience will include adult and pediatric neurologists, neurosurgeons and psychiatrists, although internists, cardiologists and general practitioners may also find the topics timely and useful.

Credit Designation:

This activity has been approved for AMA PRA Category 1 Credit™.
To Register and more information:

Visit www.cme.med.miami.edu and click on "CME Conference Information/Registration" or call the Division of CME at 305-243-6716.

Resident Spotlight

Shaping the National Neurology Curriculum: Alon Seifan, PGY-2

Dr. Alon Seifan is currently writing a grant to develop an integrated electronic medical record/ education tool where "medical information is used to provide real-time feedback to physicians in training". Through his participation in an American Academy of Neurology Task Force, his research has been used to shape what is taught to medical students in their Neurology Clerkship throughout the country.

Alon Seifan completed his undergraduate degree in Finance at the University of Florida and then received his M.A. in Decision and Information Sciences at UF. He subsequently completed medical school at Mount Sinai School of Medicine in NYC. Alon was accepted into the Department of Neurology's Resident Clinician Research Program and specifically choose UM to "take part in this research track, but also because of the strength of the clinical neurology program and faculty. I was especially impressed by the personalities of the residents and attendings and I am excited about the training in clinical research that I have already received." His specific interest involves medical education, performance improvement and behavioral sciences.



Dr. Alon Seifan has created a new electronic medical record database that is being used by physicians in training throughout the country.