PLASTIC SURGERY

Miller is named division chief

Dr. Michael J. Miller, previously professor of surgery at the University of Texas M. D. Anderson Cancer Center, in Houston, and a former resident in plastic surgery at Ohio State, began an appointment Feb. 1 as professor of surgery and chief of the Division of Plastic Surgery at Ohio State University Medical Center.

“We are very pleased that we have been able to attract Dr. Miller to return to OSU. He clearly was our first choice for the position,” says Dr. Robert L. Ruberg, professor of surgery and senior vice chairman for academic and administrative affairs in the Department of Surgery. “Mike has an outstanding reputation as an innovative microsurgeon, and he will bring much-needed skill and experience in breast and extremity reconstruction to OSU and the James. He has a vision for the future which should allow us to achieve national prominence in both the clinical and research aspects of our specialty.”

A board-certified plastic surgeon, Miller is an active clinician, educator, and researcher. His principal clinical interest is reconstructive microsurgery, a method of transferring tissues from one part of the body to another. Used in a variety of clinical situations, the technique is most commonly employed in the treatment of cancer- and trauma-related deformities.

Miller has two main research interests. The first is advanced technology applications in clinical surgery, specifically, computer simulation of tissues. “The specific project that we’re working on involves creating a simulator of the breast, which can be used for surgical planning, outcomes prediction, patient education, and as a decision-making aid,” he says.

His second research interest is tissue engineering. “The future of reconstructive surgery lies in these two areas, I believe. Tissue engineering in the clinic will depend upon computer simulation in order to plan the tissue engineering and reconstruction and tailor it to the patient.”

Miller says, “I’m enthusiastic about the atmosphere at Ohio State University Medical Center. There is a firm commitment to being a leading institution in the country. I’m excited to be part of that.

“I would like to see the Division of Plastic Surgery be a leading division in the country, to be performing surgery that is cutting edge in each of the areas of plastic surgery. I would like the training program to be highly sought after and recognized as a program that competes with the finest programs in the country. I would like to have an active research program in regenerative medicine and advanced technology applications in surgery. I would like to have a service that’s recognized internationally for specific areas, such as cancer reconstruction.”

Miller received his undergraduate and medical degrees at the University of Massachusetts, in Amherst, Mass.

He completed his residency in general surgery at Berkshire Medical Center, in Pittsfield, Mass. From 1987 to 1989, he was a resident in plastic surgery at Ohio State’s Medical Center. He then completed a fellowship in reconstructive microsurgery at Tulane University, in New Orleans.

Following his training, in 1990, Miller joined the faculty at the University of Texas M. D. Anderson Medical Center, where he served as medical director of microvascular surgery and deputy chairman of the department of plastic surgery. During his 16-and-a-half years at M. D. Anderson, the plastic surgery service:

• Grew from just two surgeons to a total of 14.
• Developed a research program in computer simulation and tissue engineering.
• Created a training program for microsurgery fellows.
• Gained full departmental status.

(See Division chief on page 2)
Incisionless surgery holds great promise, specialists say

Surgeons in the Department of Surgery at Ohio State University Medical Center are the first in the country to use a new surgical technique for abdominal procedures that could be one of the next major medical advancements in the United States.

The experimental technique, called natural orifice translumenal endoscopic surgery, holds considerable promise, say surgeons, who are using the mouth to gain access to the abdominal cavity, instead of cutting through the outside of the body.

The technique leaves no outside scarring, results in no postoperative pain, and may reduce patients’ recovery times.

“This is a first clinical step in the U.S. toward developing an incisionless and painless technique for abdominal surgery,” says Dr. Jeffrey W. Hazey, assistant professor of surgery in the Division of General and Gastrointestinal Surgery and a specialist in interventional endoscopy.

At Ohio State, the procedure is being performed in conjunction with more traditional operative techniques for diagnosing abdominal malignancies and cancer staging.

To reach the abdominal cavity, a flexible endoscopy tube encasing a fiber-optic camera and remote-controlled surgical cutting tools is inserted through the mouth. Once the tube reaches the stomach, the wall of the stomach is pierced, and the tube is advanced into the abdominal cavity, where the surgical tools can be used to perform delicate procedures.

When a procedure has been completed, the tube is withdrawn through the hole in the stomach, and the puncture is closed. Hazey says the technique may be adapted for other procedures in the body by using other natural entry points.

“Hazey and Dr. W. Scott Melvin, professor of surgery, chief of the Division of General and Gastrointestinal Surgery, and director of Ohio State’s Center for Minimally Invasive Surgery, are the first surgeons in the United States to use the new technique in clinical abdominal procedures. The technique has been used clinically in India to perform appendectomies and tubal ligations.

With additional testing and refinement, Melvin says natural orifice translumenal endoscopic surgery could become commonplace. “As with any new technology, there are many steps to take before it can be adopted for widespread use, but there is certainly a lot of excitement about this technique among surgeons.”

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**Division chief**

From page 1

Miller also held adjunct faculty appointments at the University of Texas Medical School at Houston; at Rice University, in Houston; at the Baylor College of Medicine, in Houston; and at the University of Texas at Austin.

He has received numerous honors and awards. Miller was named Houston’s top doctor by Inside Houston Magazine, and he has been listed repeatedly by Best Doctors in America and America’s Top Physicians. He has served as a consultant to the U.S. Food and Drug Administration, private industry, and professional organizations.

Miller is the author of numerous scholarly publications, including 95 articles in peer-reviewed journals.
Clinical trial examining gastric band for obese adolescents

Researchers receive grant of more than $900,000 to support five-year study

Surgeons in the Department of Surgery at Columbus Children’s Hospital and Ohio State University Medical Center are collaborating on a study of laparoscopic adjustable gastric band (Lap-Band®) surgery for the management of obesity in adolescents.

An alternative to gastric bypass, the Lap-Band® system has been approved for adults by the U.S. Food and Drug Administration since 2001, but is not yet approved for patients under 18 years of age.

The industry-sponsored clinical trial is enrolling morbidly obese patients between the ages of 14 and 17. Patients are considered morbidly obese when their body mass index (BMI) is 35 kilograms/m² or above, which means they are usually about 100 pounds over their ideal weight.

Researchers at Children’s Hospital and Ohio State’s Medical Center have received a grant of more than $900,000 from Inamed Health, the manufacturer of the Lap-Band®, to support the study, which seeks to enroll 25 patients in Columbus. Nationally, a total of seven approved U.S. medical centers will enroll about 150 patients.

Following insertion of the Lap-Band® system, patients will be closely followed over a five-year study period in order to examine changes in BMI and obesity-related co-morbid conditions. Common co-morbid conditions are insulin resistance, hypertension, depression, gastroesophageal reflux disease, type 2 diabetes, obstructive sleep apnea, and asthma.

The study comes in response to a push for bariatric surgical options for the adolescent age group. “One third of the pediatric population is overweight or obese,” says Dr. Marc P. Michalsky, assistant professor of surgery in the Division of Pediatric Surgery and principal investigator for the study. “The prevalence of obesity in the pediatric population has tripled in the last 30 years, and has been increasing at about one percent each year.”

Michalsky says that the adolescent patients he sees have the same co-morbid conditions found in obese adults, but the adolescents frequently don’t know they have them. “These are very sick kids, which supports the argument for early intervention.”

Dr. Bradley J. Needleman, assistant professor of surgery and director of the Bariatric Surgery Program at Ohio State’s Medical Center, is co-principal investigator for the study.

Michalsky says, “Our prediction is that we will be able to demonstrate safety and efficacy consistent with the adult population, in the hope that this procedure will become widely available to the morbidly obese adolescent population.”

In the minimally invasive Lap-Band® procedure, the surgeon implants a silicone band filled with saline around the upper part of the stomach to create a smaller gastric pouch, which helps patients feel full and limits the amount they eat. Tubing connects the band to an access port fixed on the exterior abdominal wall. Using the port, the surgeon can modify the amount of saline and gastric restriction to optimize the patient’s loss of excess weight.

By comparison, in the more traumatic gastric bypass procedure, the surgeon divides the stomach and reroutes the gastrointestinal tract.

Studies of gastric band surgery for adults have shown that, compared with gastric bypass, the procedure results in fewer complications, less pain, reduced hospital stay, and shorter recovery period.

Michalsky emphasizes the productive nature of the collaboration between Children’s Hospital and Ohio State. “This trial is just the first of many clinical trials we plan to conduct together, examining both adolescent and adult bariatric surgery.”

Co-investigators for the study are Dr. Dara P. Schuster, associate professor of endocrinology, diabetes, and metabolism at Ohio State, and Dr. Robert D. Murray, professor of clinical pediatrics at Ohio State and medical director of the Center for Healthy Weight and Nutrition at Children’s Hospital.
Specialists studying options for treatment of aortic aneurysms

Research may result in new standard of care

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pecificists in the Division of General Vascular Surgery at Ohio State University Medical Center are participating in a national clinical trial examining whether early, minimally invasive treatment of small abdominal aortic aneurysms provides better outcomes than monitoring the aneurysms.

An abdominal aortic aneurysm (AAA) is an abnormal expansion of the aorta that typically develops slowly and without symptoms. The expansion causes weakness in the vessel wall, bulging of the aorta itself, and increases the risk of rupture.

When such aneurysms are less than five centimeters in diameter, the risks associated with open surgical repair are often considered greater than the risk of closely monitoring the aneurysm. Surgical repair typically has been recommended once an aneurysm reaches five to six centimeters, when the risk of rupture is considered higher than the risks associated with surgery.

However, with the availability of minimally invasive techniques to repair the defect, researchers hope to determine whether a new standard of care is in order for smaller aneurysms.

“We suspect that the ability to repair these aneurysms with a minimally invasive surgical procedure means we could safely repair them soon after they’re diagnosed,” says Dr. Jean E. Starr, assistant professor of clinical surgery in the division and principal investigator in the trial for Ohio State University Medical Center. “But we need evidence to know for sure.”

In the study, patients will be randomized to receive either early endovascular placement of a stent graft in the aorta or medical surveillance of the abdominal aortic aneurysm.

A federally approved device, called an AneuRx AAA stent graft, will be placed in patients randomized to receive the intervention.

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In the minimally invasive procedure, the surgeon enters the femoral artery through an incision in the leg and inserts a catheter to position the woven polyester graft tube inside the aorta. When the stent graft is placed, it provides a permanent, alternative channel for blood flow and circumvents the aneurysm.

Patients under close surveillance whose aneurysms grow larger than five centimeters in diameter during the course of the study will also receive placement of a stent graft.

Vascular surgeons at 50 U.S. centers will enroll nearly 1,700 patients in the trial. Starr and colleagues expect to enroll 35 patients at Ohio State. Researchers seek to determine the optimal time in the development of an abdominal aortic aneurysm during which to intervene with endovascular repair.

In addition, investigators will compile data on aneurysm-related problems in smokers versus nonsmokers, aneurysm ruptures, duration of hospital stay, procedure duration, and other patient outcomes related to the use of the stent graft.

Up to 2 million Americans have abdominal aortic aneurysms, but because most patients have no symptoms, only about 200,000 cases are diagnosed each year. About 15,000 people die each year from undiagnosed AAA’s that rupture and cause massive internal bleeding. People considered at highest risk for the condition are smokers; those with high blood pressure, high cholesterol, obesity, emphysema, or family history; and men older than 60 with one or more other risk factors.
Dr. Charles H. Cook, assistant professor of surgery in the Division of Surgical Critical Care, Trauma, and Burns and medical director of surgical critical care at Ohio State University Medical Center, in November last year was honored as a visiting professor at the 50th anniversary celebration of a university hospital in Wuhan, China.

As a guest of Zhongnan Hospital of Wuhan University, Cook lectured to physicians from Wuhan and the surrounding area on current issues in surgical critical care, met with hospital officials, toured the hospital’s facilities, and attended a formal event celebrating the hospital’s anniversary.

“It was a major event for the hospital,” Cook says. “It was a two-day celebration, and they had guests from all over the world, primarily from France and the United States.”

Considered “the Chicago of China,” Wuhan is a provincial capital and the largest city in central China, with a population of 9.1 million. The city is located at the confluence of the Yangtse and Han rivers.

Before visiting Wuhan, Cook spent several days in Beijing as a visiting professor at Xuanwu Hospital, one of the 11 affiliated hospitals of Capital University of Medical Sciences.

“They have a very active research program, and they gave me a tour of their research labs and facilities,” he says.

Cook also toured the rest of the hospital, lectured on surgical critical care, met with hospital officials, and had time to visit the Great Wall, the Forbidden City, and the Temple of Heaven.

“It was quite an interesting medical-cultural experience,” he says. “There is tremendous urban growth in China that’s very impressive. For example, Beijing is a city of 18 million people, and to see a city of this size is pretty staggering. The health-care support that the city requires is tremendous. We visited just one of a large number of hospitals. I was very impressed.”

Cook says some medical practices that he observed in China differ from those used in the United States. “For instance, they use their ICU’s as recovery rooms, so that any patient who has had surgery goes through the intensive care unit and then either on to the regular patient floor, or if they aren’t well enough, they stay in the ICU.”

He notes other differences. “In Wuhan, the senior faculty live in a high-rise apartment building right by the hospital that is subsidized by the hospital. Their salaries, relatively speaking, are fairly low, but the only things they have to buy are food and clothing. Their transportation and their living quarters are paid for. It’s a totally different way of life than the average American physician would expect to lead.”

Cook says that general surgery and trauma management practices there were similar to those used here.

“They were treating a lot of the same diseases, although they were seeing more advanced stomach and pancreas cancers,” he says. “The hospital I visited saw very little trauma. It’s illegal there to own a gun, and it’s illegal for the police to shoot someone who doesn’t have a gun, so gunshot injuries are rare. In addition, the speed limits there are low, and the vehicular infrastructure is growing but still weak. The speed limits even on the freeways were often 35 to 40 miles per hour. So they see quite a bit less trauma in the average hospital there than we see in the United States.”

Dr. Yanling Wang, a former trainee of the Department of Anesthesiology at Ohio State, invited Cook and Dr. Yun Xia, associate professor of anesthesiology at Ohio State, to attend the celebration in Wuhan.

While visiting Xuanwu Hospital, in Beijing, Xia and Cook were guests of Dr. Xunming Ji, assistant president of the hospital, and Dr. Jixiu Xue, chair of anesthesiology.
**PRESENTATIONS**


**PUBLICATIONS**


**RECOGNITIONS**

Dr. Gail E. Besner, professor of surgery in the Division of Pediatric Surgery, recently received a Top Cat (Top Contributors to the Advancement of Technology) Award from TechColumbus. The awards recognize people making significant technological contributions within Central Ohio. Besner is working with a biotechnology partner to advance her research on heparin-binding EGF-like growth factor to clinical trials.

Dr. Donna A. Caniano, the H. William Clatworthy Jr. professor of surgery and chief of the Division of Pediatric Surgery, and Dr. Benedict C. Nwomeh, assistant professor of clinical surgery in the Division of Pediatric Surgery, authored a paper recognized as the 2006 Health Policy Research Paper of the Year by the Health Policy Institute of Ohio. The paper, titled “Racial and Socioeconomic Disparity in Perforated Appendicitis among Children: Where Is the Problem?,” was published in the March 2006 issue of Pediatrics.

Dr. Charles H. Cook, assistant professor of surgery in the Division of Critical Care, Trauma, and Burns and medical director of surgical critical care at Ohio State University Medical Center, on Feb. 18 was inducted as a fellow of the American College of Critical Care Medicine, at the organization’s 18th annual convocation, in Orlando, Fla. The prestigious designation of fellow, which is awarded each year to only about 50 medical professionals worldwide, honors those who have made outstanding contributions in critical care and who are considered experts in their fields.

Also, Cook was recently named director of the Surgical Intensive Care Unit Program and program director of the Surgical Critical Care Fellowship at Ohio State University Medical Center.

Dr. Juan A. Crestanello, assistant professor of surgery in the Division of Cardiothoracic Surgery, has received an American College of Surgeons Faculty Research Fellowship. Crestanello will receive $80,000 over two years in support of a project titled “Are Mitochondria-generated Free Oxygen Radicals Mediators of Preconditioning?” The fellowship is awarded to surgeons to assist in the establishment of a new and independent research career.

Susan Lamp, a nurse in the Division of Plastic Surgery, has been appointed editor of the ASPNews, a publication of the American Society of Plastic Surgical Nurses.

Dr. Sidney F. Miller, professor of surgery in the Division of Critical Care, Trauma, and Burns and director of the Burn Center at Ohio State University Medical Center, in January received on behalf of the center a check for $12,000 from the Central Ohio Chapter of the Society of Fire Prevention Engineers, proceeds from the chapter’s annual golf outing to benefit the Burn Center.

Dr. Steven M. Steinberg, professor of surgery, chief of the Division of Critical Care, Trauma, and Burns, and vice chairman for clinical affairs in the Department of Surgery, was recently appointed interim director of trauma at Ohio State University Medical Center.

Three faculty members in the Division of Cardiothoracic Surgery at Ohio State University Medical Center taught three of nine courses at the annual conference of the Society of Thoracic Surgeons, Jan. 27–31, in San Diego. Dr. C. B. Sai-Sudhakar, clinical assistant professor of surgery, presented “Ischemic Mitral Repair”; Dr. John H. Sirak, assistant professor of clinical surgery, spoke on “Surgery for Atrial Fibrillation”; and Dr. Benjamin C. Sun, associate professor of surgery and chief of the Division of Cardiothoracic Surgery, presented “Pulsatile Devices for Cardiogenic Shock.”

**PRESENTATIONS**


IN BRIEF

MMSP CORNER

Visiting professor calls MMSP “outstanding opportunity”

A former resident in general surgery at Ohio State University Medical Center who returned to Ohio State last year as a visiting professor says he was impressed with the improvements made in the program during the eight years since he completed the residency program.

“I was particularly impressed with the Master of Medical Science Program [MMSP],” says Dr. William E. Fisher, associate professor of surgery at Baylor College of Medicine and director of the Elkins Pancreas Center, in Houston, Texas. “I am grateful for the three years I spent in the basic science research lab while at OSU. However, like most of my contemporaries, I picked up bits of research methodology, statistics, and grant-writing skills through trial and error. My basic science training would have greatly benefitted from the organized MMSP core curriculum. Current and future OSU residents have an outstanding opportunity with this program.”

The MMSP core curriculum includes Research Methodology and Design, Statistics, Ethics, and Teaching Methods or Grants Management. Residents also complete a minimum of 45 credit hours in elective topics, such as molecular virology and gene therapy, genetics, biomedical informatics, and pharmacogenomics. The program allows residents to choose a focus in clinical, basic science, or educational research.

“The structure of the MMSP ensures that every resident receives a uniform experience, and it provides them with the tools necessary to succeed in academic surgery,” Fisher says. “Perhaps the most important feature of the program is that residents who do not have an interest in basic science research and are more interested in clinical research or education have the opportunity to explore these important aspects of academic surgery. The MMSP shores up a weakness of most surgery programs in the country, which offer only traditional basic science lab experiences for their residents. The MMSP greatly enhances the general surgery residency program at OSU.”

A graduate of Wittenberg University, in Springfield, Ohio, Fisher received his medical degree at the University of Cincinnati. Following an internship at Mount Carmel Medical Center, in Columbus, Ohio, he completed a residency in general surgery at Ohio State in 1998. While at Ohio State, he also completed a fellowship in oncology research.

Following his residency, Fisher began an appointment as assistant professor of surgery at Baylor College of Medicine. In 2003, he was named director of the Elkins Pancreas Center. He was promoted to associate professor of surgery in 2004.

A fellow of the American College of Surgeons, Fisher is an active member of the Association for Academic Surgery and the Society of University Surgeons.
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