MINIMALLY INVASIVE SURGERY

Specialists at Ohio State first in U.S. to use incisionless reflux technique

Specialists in the Department of Surgery at Ohio State University Medical Center recently were the first in the United States to use a new transoral incisionless technique for the treatment of gastroesophageal reflux disease (GERD).

GERD is a condition in which the lower esophageal sphincter, the valve separating the esophagus and the stomach, fails to close and allows stomach acid to back up into the esophagus. The disease can lead to more serious medical conditions, including cancer of the esophagus. Nearly 30 million Americans suffer from chronic GERD.

In the new procedure, the surgeon uses a flexible endoscope to insert a fastener-deploying device called the EsophyX through the mouth into the stomach. There, the surgeon uses the device to place polypropylene sutures, reconstructing the defective esophageal sphincter. The surgeon views the operation using a fiberoptic camera deployed through the endoscope.

The result for the patient is little or no postoperative pain, no external scarring, a faster recovery, and fewer and less severe complications than would be expected with either open or laparoscopic procedures, both of which require incisions. Most patients spend one night in the hospital and are released symptom-free.

The EsophyX has been in use in Europe and recently was approved for use in the United States by the Food and Drug Administration.

“The device offers a treatment for patients who suffer from an advanced degree of GERD, and until now, would have been candidates for surgery,” says Dr. W. Scott Melvin, professor of surgery, chief of the Division of General Surgery and director of the Center for Minimally Invasive Surgery at the Ohio State’s Medical Center.

Melvin and Dr. Dean J. Mikami, assistant professor of surgery in the Division of General and Gastrointestinal Surgery, have used the EsophyX to treat two patients at Ohio State’s Medical Center, which is one of the nation’s leaders in incisionless surgery.

“Throughout medical history, we have gone from a very painful surgery, to a better-tolerated surgery, and now, to a potentially pain-free incisionless procedure,” Melvin says. “In addition, the new procedure allows a treatment option for many patients whose reflux is not severe enough to require surgery.”
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CLINICAL CARE

SURGICAL ONCOLOGY

Advances in therapy, surgery extending lives of cancer patients

Some colorectal cancer patients with metastases only to the liver are having their lives extended by advances in treatment, say specialists in medical and surgical oncology at Ohio State University Medical Center.

In many cases, the patients have had tumors that most modern medical textbooks define as inoperable. But major advances in chemotherapy and in surgical techniques over the past five years have made previously inoperable tumors operable and greatly improved the possibility of cure for about 10 percent of these patients, says Dr. Mark Bloomston, assistant professor of surgery in the Division of Surgical Oncology.

“The traditional dogma of who shouldn’t get liver surgery is now being debunked,” says Bloomston, a specialist in liver and pancreas malignancies. “This means, of course, that it’s critical for physicians to correctly identify which patients may qualify for additional treatment.”

In determining the best treatment plan for each patient, Bloomston works closely with colleagues, such as Dr. Tanios Bekaii-Saab, assistant professor of hematology and oncology at Ohio State and a medical oncologist specializing in gastrointestinal cancer.

Both physicians, who are also researchers at the Ohio State University Comprehensive Cancer Center, stress the importance of multidisciplinary patient care. Each patient is seen by a team that includes a medical oncologist, a surgical oncologist, an interventional radiologist, and when needed, a radiation oncologist.

Colorectal cancer is the third most common cancer and the third leading cause of cancer-related mortality in men and women in the United States. About half of the 150,000 newly-diagnosed colorectal cancer cases this year will spread to the liver, Bloomston says.

“We almost always think of metastatic cancer as a death sentence,” Bekaii-Saab says. “But colorectal cancer that has spread only to the liver is one of the very few instances of metastatic disease with the potential for cure.”

The liver is one of the few solid organs capable of regenerating. “We can often remove up to 80 percent of the liver, and a year later, it will have restored itself to nearly normal size,” Bloomston says.

However, not every patient with colorectal cancer that has spread only to the liver is a candidate for liver surgery. At Ohio State, patients go through a rigorous screening process to make sure that their heart, lungs, and kidneys can withstand the treatments.

Bloomston and his colleagues are treating an increasing number of patients surgically. He says about 30 percent of patients with the disease are eligible for surgery.

“We have some very effective chemotherapy and targeted agents that can shrink these tumors prior to surgery,” Bekaii-Saab says. “We can actually downstage the disease in a lot of patients who are deemed incurable, and give them a shot at a possible cure.”

Advances in surgical techniques make it possible to manipulate the liver. In some cases, Bloomston employs portal vein embolization, a technique that restricts blood flow to the portion of the liver to be removed and increases the flow to the healthy areas of the liver.

“We essentially block blood flow to the tumor-bearing portions of the liver, which then shrink,” Bloomston says. “We wait four to six weeks to operate, letting the part of the liver that wasn’t embolized to enlarge, which significantly improves the chances of a good recovery.”

The multidisciplinary approach and the advanced therapies are making a difference. “In the year 2000, patients with metastatic colorectal cancer survived an average of one year after diagnosis,” Bekaii-Saab says. “Today, it’s an average of three years. That’s something we’ve never seen before with metastatic disease. It’s revolutionary.”
Breast cancer patients who need mastectomies have more reconstructive surgery choices than ever before, yet too few survivors are choosing these options, says a specialist in the Department of Surgery at Ohio State University Medical Center.

For patients who have had a mastectomy to surgically remove one or both breasts, the principal benefit of reconstructive surgery is an improved quality of life, says Dr. Michael J. Miller, professor of surgery and chief of the Division of Plastic Surgery at Ohio State’s Medical Center.

“About 50 percent of mastectomy patients are candidates for reconstructive surgery, yet nationwide, only about 10 percent receive it.

“Our goal is to integrate reconstructive surgery into the entire treatment plan for the patient; it should not be an afterthought,” says Miller, who specializes in cancer reconstruction.

Studies have shown that reconstructive surgery is safe and does not interfere with treatment or increase the risk of recurrence of breast cancer, he says.

A lack of knowledge about the surgical methods of reconstruction available, both on the part of patients and physicians, may be partly to blame for the low number of women who choose to undergo reconstructive surgery, Miller says.

“Reconstruction may involve artificial implants, which remain a suitable option for selected women,” he says. “Newly developed techniques use a woman’s own tissue, giving a natural look and minimizing long-term complications.”

Miller prefers to meet with patients soon after their initial diagnosis, to plan reconstruction based on individual medical needs and personal preferences. Certain types of cancer treatment, particularly radiation, may affect reconstructive surgery options.

“If we know ahead of time that the patient will require radiation, we may change our plans for reconstructive surgery, because radiation changes tissue that’s been treated, making it less able to undergo surgery reliably,” he says.

Miller often works alongside a surgical oncologist in the operating room during a mastectomy procedure. Once the breast tissue has been removed, he performs the reconstructive surgery, using the patient’s own tissue from the lower abdomen, buttocks, thighs, or back.

“This way, patients never have to be without a breast, and they have the best chance of having a breast very similar in appearance to before the surgery,” Miller says. “There are a variety of ways that breast cancer reconstruction can be done, and it’s important for patients to realize that there is no single best option for everybody.”

He suggests that breast cancer patients considering a mastectomy initiate a discussion with their oncologist and ask the following questions:

• Am I a candidate for reconstructive surgery?
• Which reconstructive surgery options are available and best for me?
• Will a plastic surgeon who specializes in reconstructive surgery be part of my oncology treatment team?
• How will chemotherapy or radiation treatment affect my planned reconstructive surgery?
• How soon after the mastectomy will the reconstructive surgery take place?

“I try to personalize the techniques and the approach to the reconstruction, based upon the patient’s preferences, personal goals, and lifestyle, because they all bear upon what might be the best operation and approach for that person,” Miller says.
A bronze bust of Dr. Edwin H. Ellison (see photo on page 8) was recently installed in the Department of Surgery’s display case on the third floor of Means Hall, in recognition of the former faculty member’s contributions to Ohio State University Medical Center.

Ellison joined the faculty of the department in 1946, after completing his residency in general surgery at Ohio State, under the mentorship of Dr. Robert M. Zollinger, then chairman of the department.

Ellison and Zollinger went on to perform the landmark studies that resulted in their identification of the disorder now known as Zollinger-Ellison syndrome, a condition characterized by intractable peptic ulcers, gastric hypersecretion and hyperacidity, and the occurrence of gastrinomas of the pancreatic cells of the islets of Langerhans. Their findings were published in Annals of Surgery in 1955.

Ellison served on the surgical faculty at Ohio State for 12 years. During this time, his achievements as a gifted clinical physician and technical surgeon, inspiring educator, and accomplished surgical investigator were important influences in the department’s rapid development and success after World War II.

In 1958, Ellison accepted an appointment as professor and chairman of surgery at Marquette University School of Medicine, now the Medical College of Wisconsin, in Milwaukee.

At Marquette, Ellison trained Dr. Larry C. Carey, who would later serve as professor and chairman of surgery at Ohio State, from 1975 to 1985.

While at Ohio State, Carey trained Ellison’s son, Dr. E. Christopher Ellison, now the Robert M. Zollinger professor and chairman of surgery, associate vice president for health sciences, and vice dean of clinical affairs at Ohio State University Medical Center.

“Dr. [Edwin] Ellison was unique,” Carey said during a 1994 interview. “He had a remarkable ability to get more out of people than was in them. He convinced all of us that we were a lot better than we were, and having done so, he helped us achieve more than we might have.”

Under Ellison’s leadership, the surgical faculty at Marquette made important contributions to the field of gastrointestinal surgery, and the department and its academic reputation grew and flourished.

Ellison died in 1970. He is remembered as a successful leader in academic surgery who made significant contributions to the profession of surgery, both at Ohio State University Medical Center and at the Medical College of Wisconsin.

The bust of Ellison was sculpted by artist Anna D. Christoforidis, who also created the bust of Zollinger exhibited in the department’s display case.

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Dr. David E. Lindsey, previously a surgical critical care fellow at the University of California-Davis, in Sacramento, Calif., and a graduate of the College of Medicine at Ohio State, in August began an appointment as assistant professor of surgery in the Division of Critical Care, Trauma, and Burn.

Lindsey’s appointment brings to six the attending faculty complement in the division, which was formed in 2006.

Lindsey received both his undergraduate and medical degrees at Ohio State. He completed his internship in general surgery and a residency in vascular and general surgery at Stanford University Hospital, in Stanford, Calif. He was a resident in cardiothoracic and vascular surgery at the University of Southern California Los Angeles County Hospital, Good Samaritan Hospital, and Children’s Hospital, in Los Angeles.

Lindsey was then a cardiovascular and thoracic surgeon in community practice for 22 years.

From 2006 to 2007, he was a fellow in surgical critical care and trauma at the University of California-Davis Department of Surgery.

He is an associate fellow of the American College of Surgeons.


Brandeberry A, Miller SF, Coffey R. C-reactive protein as an early indicator of septicemia. Great Lakes Burn Association, Annual Meeting, Ohio State University Medical Center, Columbus, Ohio, Sept. 27–28, 2007.


Henry ML. Minority organ and tissue donation. National Institutes of Health, National Institute of Diabetes and...


**Henry ML.** Surgery in the cirrhotic. Seventh Annual Advances in Minimally Invasive Surgery, Center for Minimally Invasive Surgery, Ohio State University Medical Center, Marco Island, Fla., March 2, 2007.


**Lehman KJ, Miller SF.** Delayed application autograph storage solution. Great Lakes Burn Association, Annual Meeting, Ohio State University Medical Center, Columbus, Ohio, Sept. 27–28, 2007.

**Melvin WS (Moderator).** Challenges for human applications of NOTES. American College of Surgeons, 93rd Annual Clinical Congress, General Surgery General Session, New Orleans, La., October 8, 2007.


**Melvin WS (Moderator).** Minimally invasive pancreatectomy. American College of Surgeons, 93rd Annual Clinical Congress, General Surgery Video Session, New Orleans, La., October 9, 2007.


**Miller SF, White LM, Beers E, Coffey R.** Nutritional goal delivery assessment in acute burn patients. Great Lakes Burn Association, Annual Meeting, Ohio State University Medical Center, Columbus, Ohio, Sept. 27–28, 2007.


### RECOGNITIONS

Dr. Charles H. Cook, a faculty member in the Division of Critical Care, Trauma, and Burn and medical director of surgical critical care at Ohio State University Medical Center, in Oct. 2007 was promoted to the rank of associate professor of surgery. Also, the Surgical Critical Care Program in October 2007 received continued accreditation from the Residency Review Committee (RRC) for an additional five years. The RRC also approved an increase in the fellow complement from two to four.

**Nick DiPaola, Ph.D.,** transplant technologist and HOA director-in-training in the Division of Transplantation, received the award for best case presentation at the Solid Organ Case Studies Workshop of the 33rd Annual Meeting of the American Society of
Histocompatibility and Immunogenetics, which was held Oct. 8–12, 2007, in Minneapolis, Minn. DiPaola’s presentation was titled “Acute Humoral Rejection Mediated by Donor Reactive Anti-Endothelial Antibodies Identified Using Xmone.”

Dr. Elmahdi A. Elkhammas, associate professor of clinical surgery and chief of liver transplantation in the Division of Transplantation, has developed a visiting scholars program that provides international medical graduates with surgical education and career guidance during observerships of one to two months. Since Jan. 2007, when the program began, seven visiting scholars from Libya, Syria, Tunisia, and Kuwait have participated. Dr. Elkhammas developed the program with the assistance of the Office of International Medicine at Ohio State.

Dr. Bryan Fisher, a resident in general surgery, and his wife, Latita, last year raised $8,500 to assist children with congenital heart disease and their families through their Golfing for Hearts golf tournament. Founded by the Fishers to support the pediatric cardiac surgery program at Nationwide Children’s Hospital, the event was held in August at the Columbus Zoo and Aquarium’s Safari Golf Club, and drew more than 40 golfers and 60 participants.

Dr. Jonathan I. Groner, a faculty member in the Division of Pediatric Surgery, in Oct. 2007 was promoted to the rank of professor of clinical surgery.

Dr. Peter Muscarella, a faculty member in the Division of General and Gastrointestinal Surgery, in Oct. 2007 was promoted to the rank of associate professor of surgery.

Dr. Stephen P. Povoski, associate professor of surgery in the Division of Surgical Oncology, in Oct. 2007 was awarded tenure.

Heidi Pieper, residency program assistant in the Department of Surgery at Ohio State University Medical Center, recently was an invited speaker at a national meeting for residency program staff, where she discussed the research year of surgical residents and fellows at Ohio State.

She presented “Resident/Fellow Research Projects and Research Year” Oct. 3, 2007, at the 11th Annual Surgery and Surgical Specialties Residency Program Administrators and Coordinators Workshop, in Las Vegas, Nev. The meeting was sponsored by the National Center for Evaluation of Residency Programs.

During her workshop session, Pieper discussed:

• The purpose of the Master of Medical Science Program (MMSP) during the research year at Ohio State.
• The structure of Ohio State’s research year.
• Interpreting the Accreditation Council for Graduate Medical Education requirements for research.
• Opportunities made available to surgical residents at Ohio State.
• Ways to monitor the progress of residents and foster productive research projects.

“Residency programs across the United States are looking for ways to provide more educational opportunities for their residents,” she says. “The Master of Medical Science Program at Ohio State gives our residents the educational opportunities they need to be able to excel in their scholarly activity.”

Pieper received a B.A. in English at Ohio State. She joined Ohio State’s Department of Surgery as residency program assistant in 2005.
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4 Bust of Dr. Edwin Ellison installed

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