

First in State To Implant Stomach Pacemaker Laparoscopically

UAMS Medical Center surgeons Stephanie W. Granger, M.D., and James R. Barnes, M.D., recently became the first physicians in Arkansas to implant a stomach pacemaker laparoscopically. Laparoscopic surgery, which uses fiber-optic tubes called laparoscopes, is a minimally invasive way to treat various disorders within the abdominal cavity.

The stomach pacemaker is a treatment for gastroparesis. "Patients who suffer from gastroparesis have an abnormality in the autonomic nerve fibers that control the stomach's motility," Granger explained. "The problem may be nerve fibers that don't work correctly or a decreased number of nerve fibers, but the result is the same — the stomach doesn't empty properly. Those with the most severe form of this disease generally weigh less than 100 pounds, can take nothing by mouth, suffer intractable nausea and vomiting, and are dependent on intravenous nutrition. The pacemaker stimulates the autonomic nerve fibers, but unfortunately doesn't cure gastroparesis. However, it does lessen nausea, vomiting

and pain, and that significantly improves the quality of life."

The pacemaker is implanted on the outer edge of the stomach. First, the surgeons locate the pylorus (the opening, surrounded by muscular tissue, from the stomach into the first section of the small intestine). From there, they measure 10 cm up and sew in two electrodes. They then create a pocket in the subcutaneous tissue next to the electrodes. After attaching the ends of the electrodes to a tiny generator and running a test to make sure they are conducting properly, the surgeons place the generator inside the pocket and sew it closed. Patient improvement is usually noticeable within six months to one year after surgery.

So far, Barnes and Granger have laparoscopically implanted six stomach pacemakers in Arkansas. They have also been teaching this procedure to surgeons from other medical centers throughout the United States, including those at Harvard University and the University of Michigan. In fact, UAMS Medical Center is one of only two facilities in the country offering surgeons educational courses in

this particular technique.

"Our new high-tech operating room in University Hospital enables us to serve as a teaching area for all our laparoscopic procedures," Barnes said. "It features microlaparoscopic instruments and cameras and advanced video equipment; we use a new robotic arm called Aesop to direct the cameras. There are also voice-activated, computerized room systems to regulate the lighting, temperature, operating table and telephones. The facility is a Stryker Endoscopy Center of Excellence — one of only 12 such state-of-the-art facilities developed in the United States."

Benefits of laparoscopy over traditional surgery include less pain and fewer complications postoperatively; shorter hospitalization; smaller scars; and quicker return to work and other normal, daily activities.

For more information about laparoscopic surgery, call Barnes or Granger in the UAMS Medical Center Department of Surgery, (501) 686-5030.