

## **Endoscopy Enters New Era in Medicine**

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Tulane doctors are advancing a variety of gastrointestinal disease-fighting therapies using new technologies and advanced equipment, says Dr. Virendra Joshi, medical director of therapeutic endoscopy at the Endoscopy Center at Tulane Medical Center.

Dr. Virendra Joshi

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Gastroenterologists such as Dr. Virendra Joshi are performing more and more types of procedures to manage diseases of the esophagus, stomach, gall bladder, bile duct, pancreas, colon, liver and small intestine. (Photo by Paula Burch-Celentano)

Gastroenterologists can look into the natural orifices of the body using an endoscope, which is a long, thin, usually flexible tube with an optical element or manipulative tool, or both.

As endoscopic equipment has become progressively more sophisticated, says Joshi, it has become possible for gastroenterologists to begin performing more and more types of therapeutic procedures to manage diseases of the esophagus, stomach, gall bladder, bile duct, pancreas, colon, liver and small intestine.

“We do all our clinical procedures here at the Endoscopy Center, starting with simple endoscopies where we look at the esophagus, stomach, colon (colonoscopies) when we try to remove polyps, an important procedure used to prevent cancer,” says Joshi, who also is associate professor of clinical medicine in the section of gastroenterology and clinical associate professor of surgery at Tulane University School of Medicine.

Endoscopy, which basically means “looking inside,” enables doctors to send their instruments through natural orifices to areas deep within the body close to potential trouble spots. Until fairly recently, endoscopy was used mainly for making visual

examinations that assisted diagnoses about diseases of the esophagus, stomach and small intestines or colon, while open surgery was employed to carry out therapeutic procedures such as the removal of tumors or the draining of cysts.

With the manipulative capabilities of today's equipment, gastroenterologists can take biopsies and acquire high-resolution diagnostic imagery, including ultrasound imagery.

“Now we can do things by endoscopy that we used to have to operate for,” says Joshi. “For example, if you have a big polyp in the colon, or somewhere else, you used to have to operate to remove it. Now we can go inside and take it out. There was a time when to do a biopsy of the pancreas you would have to do it surgically. Now we go from the bowel into the small intestine, and push a needle inside and take a biopsy. We can remove stones from the bile ducts. So instead of extracorporeal invasion, we are right inside the body in trying to analyze problems inside the body.

“We are basically at the point where we are meeting the surgeons,” says Joshi. “Surgeons are getting less invasive, and we are getting a little more invasive. This area in internal medicine is moving fast towards surgery in many of its procedures.”

The benefits of these therapies are many, says Joshi, including greater patient safety, quicker recovery time and lower cost.

The Tulane Medical Center's Endoscopy Center is key to putting this medical theory into practice, according to Joshi. “The center is generally the area where all the technology comes into gastroenterology work,” he says. “Everybody looks to development in this area to move us into the future, which will be characterized more and more by minimally invasive surgery.”