

Surgeons offer procedures through belly button

September 23 2012, by Cheryl Powell

There's a novel way to remove a gallbladder: Use a surgical robot to take it out through the navel.

Rather than using just their hands to guide instruments through multiple incisions, some surgeons are performing remote-controlled procedures through the patient's belly button.

The single-port, robotic-assisted gallbladder removal is the latest step in the push to make minimally [invasive procedures](#) even less invasive.

After placing robotic arms and a 3-D camera through a 1 1/2-centimeter incision in the belly button, trained surgeons can sit away from the patient at a control panel for the daVinci [Surgery](#) System and carefully navigate through an inflated [abdominal cavity](#) with tiny, precise movements.

"We are heading toward minimizing minimally invasive surgery," said Dr. Jihad Kaouk, director of the Center for Robotic and Image Guided Surgery at the Cleveland Clinic.

The first robotic single-port gallbladder removal using new instruments designed for the technique was performed about 1 1/2 years ago at the Cleveland Clinic as part of a trial, according to Kaouk. The surgical system was approved by the U.S. [Food and Drug Administration](#) for gallbladder removal about nine months ago.

Akron General and Summa health systems in Akron, Aultman Hospital and Mercy Medical Center in Canton and Wooster Community Hospital are offering the single-incision, robotic [gallbladder surgery](#) to patients who qualify for the procedure, according to the maker of the daVinci Surgical System.

Performing surgery through the belly button can mean less scarring, reduced pain, lower blood loss and faster recovery than with the four incisions typically used for laparoscopic surgery, according to Dr Adrian G. Dan, an advanced [laparoscopic surgeon](#) at Summa.

And by operating with a robot through the single port, he said, surgeons can get a better view with less clashing of instruments than what occurs when they try to manually move [surgical tools](#) through one opening.

With robotic-assisted single-incision surgery, "the movements are much smoother," agreed Dr. Charu Paranjape, director of acute-care surgery service at Akron General. "It has 3-D vision, so it's much clearer."

Because the robotic approach is newer, the procedures can take longer and cost more, Paranjape said. The single incision also needs to be slightly larger compared to the cuts used for a multiport, minimally invasive approach.

But, he said, "the important part is it's evolving. It's very exciting."

When John Mohny, 46, of Stow, Ohio, had his malfunctioning gallbladder removed at Summa Akron City Hospital last week, he opted for Dan to perform the procedure through one incision in the [belly button](#).

"It seemed like a good choice - one incision instead of four," he said.

Mohney was a good candidate for single-port robotic surgery because he's not overweight and doesn't have scarring from previous abdominal surgery - factors that can be contraindications, Dan said.

Mohney left the hospital several hours after his surgery. Two days later, he was able to go watch his son's middle school football game.

"It's a lot better than I thought it would be," he said. "I'm glad I did it this way."

Not everyone, however, is convinced less is more.

Dr. Raymond P. Onders, director of the adult minimally invasive surgery program at University Hospitals Case Medical Center in Cleveland, said he stopped doing any procedures through a single incision after discovering an increased risk for postsurgical hernias.

The results of a multisite, long-term study presented last year by Onders at an American College of Surgeons meeting showed 8.4 percent of patients suffered postsurgical hernias at the incision site within one year of single-incision laparoscopic [gallbladder removal](#). Patients who had gallbladders removed through the four-port laparoscopic procedure had a 1.2 percent postsurgical hernia rate.

"We feel the data did not support single-port gallbladder surgery," he said. "It's not worth having a second surgical procedure."

Instead, Onders said, he opts for minimally invasive surgery with fewer incisions - three instead of four.

Summa's Dan said the risk for hernia can increase whenever larger incisions are used. However, he said, the risk can be minimized if "a very meticulous, good closure" is performed by the surgeon.

Kaouk pointed to another multisite study involving Cleveland Clinic surgeons that showed no increased hernia risk with single-port laparoscopic procedures.

Kaouk said he expects more robotic procedures to be done through a single incision as the technology improves.

"We think that the future of single-port surgery would be in robotics," he said, "and we are just witnessing the early attempts of it."

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