Doctors Try New Surgery for Gallbladder Removal

By DENISE GRADY

Doctors in New York have removed a woman’s gallbladder with instruments passed through her vagina, a technique they hope will cause less pain and scarring than the usual operation, and allow a quicker recovery. The technique can eliminate the need to cut through abdominal muscles, a major source of pain after surgery.

The operation was experimental, part of a study that is being done to find out whether people will fare better if abdominal surgery is performed through natural openings in the body rather than cuts in the belly. The surgery still requires cutting, through the wall of the vagina, stomach or colon, but doctors say it should hurt less because those tissues are far less sensitive than the abdominal muscles.

Interest in this idea heightened after doctors from India made a video in 2004 showing an appendix being taken out through a patient’s mouth. The patient had abdominal scars that would have made conventional surgery difficult.

The New York patient, 66, had her gallbladder removed on March 21 and is recovering well, said her surgeon, Dr. Marc Bessler, the director of laparoscopic surgery at Columbia University Medical Center. Dr. Bessler said he thought it was the first time the operation had been performed in the United States, and he plans to show a video of the operation at a gastroenterology meeting in Las Vegas on Sunday.

“Going through a natural orifice, the mouth or rectum or vagina, to get into the abdomen and do an operation, is being excitedly worked on by a whole lot of people,” Dr. Bessler said, adding that companies were beginning to make special surgical tools for the operations and that doctors had formed an organization called NOSCAR (www.noscar.org), which stands for Natural Orifice Surgery Consortium for Assessment and Research.

The idea is part of a broader trend to make surgery less and less invasive. In the late 1980s and early ’90s, surgeons began removing gallbladders with laparoscopic surgery, performed through a few small slits in the belly for a camera and surgical tools instead of the 10-inch incision needed for the original, open operation. Although some doctors were skeptical at first about the laparoscopic approach, it soon caught on, and now accounts for 90 percent of gallbladder operations.
“But patients still have pain, recovery time and scars,” Dr. Bessler said. “The next phase to make it better is to eliminate the remaining causes of pain — incisions and instruments that have to go through the muscles of the abdominal wall.”

Surgeons not involved in the research had mixed reactions.

Dr. Christine Ren, an associate professor of surgery at New York University’s school of medicine, called the vaginal procedure “repulsive” and said: “As a woman I find it very invasive, physically and emotionally. To me it’s quite distasteful. You will really have to prove to me that there is a benefit.”

Dr. Ren questioned whether women would accept it, and pointed out that even though conventional laparoscopic surgery required cutting through the belly, it had an excellent safety record and patients recovered quickly. She said the idea of puncturing internal organs and then sewing them up was cause for concern.

But she also said, “I give them a lot of credit for trying new things.”

Dr. Walter E. Longo, a professor of surgery at Yale, said that the technique was “extremely experimental” and that there was no information yet about whether it would work as well or be as safe as conventional laparoscopic surgery. If the natural-orifice approach is to gain acceptance, it will have to measure up to the standard technique in a study, he said.

Dr. Longo also said he thought the new technique would be limited to relatively small operations like taking out the gallbladder or appendix, or exploring the abdomen to assess pain or determine the stage of a cancer.

“I think we’re all sort of waiting to see how safe it is and how it’s accepted, and above all to make sure it doesn’t do any harm to patients,” Dr. Longo said.

At Stanford, Dr. Myriam J. Curet, a professor of surgery, said, “It has some promise, and there’s a lot of interest in the surgical community, a lot of attention being paid to it as a wave of the future.” Dr. Curet acknowledged that the idea was a bit disturbing at first, and said that even an audience of doctors shuddered at the video of the appendix being pulled out through the patient’s mouth. But if the recovery does turn out to be quicker and less painful than the current methods allow, patients might want the procedure, including women in whom it would be performed vaginally.

Dr. Bessler said his patient agreed to the procedure (two others had declined) because he told her he thought it would have advantages for her, and she accepted his judgment. She was the first in a study that is to include 100 women who need gallbladder surgery, appendectomies or biopsies taken from inside the abdomen. All the procedures will be done through the vagina.
Dr. Dennis Fowler, another surgeon who participated in the operation, said the team began experimenting on women because “incisions in the vagina have been used for a variety of procedures for decades, and proved safe with no long-term consequences.” Dr. Bessler said he and his colleagues had been doing practice operations in the laboratory on pigs for the past year, removing gallbladders, spleens, kidneys and stomachs through the mouth or vagina.

Eventually, Dr. Bessler said, he expects to use the natural-opening technique on men as well as women, with instruments passed down the throat or into the rectum to cut through the wall of the stomach or intestine to reach the gallbladder or other organs. But first, surgeons have to develop techniques to make sure that the cuts in the stomach and intestine can be sealed completely after the operation so that they do not leak into the abdomen, which could cause serious complications. Incisions through the wall of the vagina rarely cause leaks, he said.

Cutting through the wall of the vagina is safe even for women who may want to have children later, because scarring would not interfere with labor or birth, Dr. Bessler said. The vaginal incision in the surgery last month was about an inch long, which was large enough to allow the gallbladder to be removed.

The operation took about three hours, twice as long as the usual laparoscopic surgery, but it was the team’s first operation on a human, and the time should decrease with practice, Dr. Bessler said. Also because it was the first time, to be on the safe side, the doctors did make three small openings in the abdomen for surgical tools. But their ultimate goal is to perform the operation entirely through the vagina.