

Surgeons taking kidneys through the navel

Pioneering procedure is less painful, reduces recovery time for donor

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CLEVELAND - Brad Kaster donated a kidney to his father this week, and he barely has a scar to show for it.

The kidney was removed through a single incision in his bellybutton, a surgical procedure Cleveland Clinic doctors say will reduce recovery time and leave almost no scarring.

"The actual incision point on me is so tiny I'm not getting any pain from it," Kaster, 29, said Wednesday. "I can't even see it."

Kaster was the 10th donor to undergo the procedure at the Cleveland Clinic. Dr. Inderbir S. Gill and colleagues at the research hospital on Thursday were to perform the 11th such procedure, which Gill said could make kidney donations more palatable by sharply reducing recovery time.

More than 80,000 Americans are awaiting kidney transplants. Last year, there were about 13,300 kidney donors in the U.S., and about 45 percent were living donors, according to the Organ Procurement and Transplantation Network.

The first 10 recipients and donors whose transplants used the single-incision navel procedure have done well, according to the researchers. They report on the first four patients in the August issue of the Journal of Urology.

Preliminary data from the first nine donors who had the bellybutton procedure showed they recovered in just under a month, while donors who underwent the standard laparoscopic procedure with four to six "key hole" incisions took just longer than three months to recover.

The clinic says the return-to-work time for single-point donors is about 17 days, versus 51 for traditional multi-incision laparoscopic procedure.

"For me, that's huge so I can get back to work," said Kaster, a self-employed optometrist.

Patients of the new procedure were on pain pills less than four days on average, compared with 26 days for laparoscopic patients.

"This represents an advance, for the field of surgery in general," said Gill, who predicted the bellybutton entry would be used increasingly for major abdominal surgery in a "nearly scar-free" way.

"Will this decrease the disincentive to (kidney) donation? I think the answer is yes," Gill said.

Better for the donor

Drs. Paul Curcillo and Stephanie King of Drexel University College of Medicine in Philadelphia developed a single-incision technique and Curcillo was the first to use the method to remove a woman's gallbladder through her bellybutton in May 2007. They've since used it for a number of different kinds of surgery.

Curcillo said the bellybutton procedure "will definitely make things better" for the donor. "A donor is one of the most altruistic people you'll ever meet. He's giving his kidney up. So anything you can do to make it better for that patient, they deserve it," he said.

Laparoscopic surgery revolutionized the operating room more than 15 years ago, replacing long incisions with small cuts and vastly reducing pain and recovery time. Researchers are now exploring ways to eliminate scars by putting instruments through the body's natural openings like the mouth, nose and vagina to perform surgery.

The method used by the Cleveland Clinic takes advantage of the belly button to avoid a visible scar. Gill said the procedure was approved by the clinic's internal review board as an extension of its laparoscopic surgical work. He has begun training other surgeons on the procedure. It is not used to transplant the kidney into the receiving patient.

Dr. Louis R. Kavoussi, head of the Arthur Smith Institute for Urology of the North Shore Long Island Jewish Health System in New York and the co-author of an editorial in the journal, said the method needs to be studied to determine if patients fare better. "The reality is that nobody knows if this is an advance other than cosmetic," said Kavoussi.

The procedure involves making a three-quarter inch (2-centimeter) incision in the interior of the bellybutton and

inserting a tube-like port with several round entry points for inserting a camera and other tools into the belly.

The belly is inflated with carbon dioxide to provide maneuvering room. The kidney is then freed from connecting tissue, wrapped in a plastic bag and removed through the navel when the blood supply is cut, shrinking the organ's fist-like size. The incision is expanded to about 1 1/2 inches (3.2 centimeters) to extract the kidney after the port is removed.

The procedure would not be appropriate for those who have had multiple major abdominal surgeries or who are obese, Gill said. Both conditions would limit the ability to look around the abdomen and move about instruments.

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