

First “Scarless” Hernia Repair Performed by Center for the Future of Surgery at UC San Diego Medical Center

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Surgeons at UC San Diego Medical Center have reported what is believed to be the world's first hernia repair conducted through one of the body's natural openings. As part of a clinical trial, minimally invasive surgeons Garth Jacobsen, M.D., and Santiago Horgan, M.D., were able to repair a painful weak spot in a patient's abdominal wall using the vagina as the path to the surgical site.

"This minimally invasive hernia repair is believed to be the first of its kind in the U.S. and abroad," said Horgan, director of the UC San Diego Center for the Future of Surgery. "If research proves that this 'natural orifice' technique is ideal for patients, more than 50,000 women in the U.S. may be eligible for this innovative hernia surgery."

"I now feel good. I feel strong. The difference between this surgery and my previous hernia repair is night and day. I feel fantastic," said the patient, 38 year-old Leah Kent of Torrey Highlands, San Diego.

A hernia is an abnormal bulging of organs or fatty tissue through a muscular wall. The bulge is repaired by closing the hole with stitches and then placing a mesh over the repair for reinforcement. The mesh is made up of a biologic absorbable material and over time is incorporated into the body's tissue.

This repair itself was performed by entering the vagina and making a small incision behind the uterus through which the abdomen could be accessed with surgical tools. Only one small external incision was made to place a camera to safely view the surgery. A traditional laparoscopic repair uses three incisions.

Kent, who believes that her hernia developed as a result of genetics and pregnancy, says that her family members have had hernia repair. She also recently gave birth to her fifth child.

"The hernia was apparent by looking at my stomach. There was a bump there that was visible through my shirt and internally painful," said Kent. "I was interested in this option because I wanted anything with less scarring. I previously had a hernia repair that left a 4 inch zig-zag scar across my belly button and I was always aware of the material used to perform the repair. I did not want the same again."

The two hour clinical trial surgery was performed under general anesthesia. After two days the patient returned to normal activities.

"The UC San Diego Center for the Future of Surgery is testing new techniques designed to minimize or eliminate incisions through the abdominal wall," said Jacobsen. "What we are seeing is that the vagina is a route that heals very quickly. This technique also looks particularly promising for surgeries to treat obesity such as gastric banding and partial stomach removal. Only through testing will know the full range of possibilities that are most safe and effective for patients."

The process of performing surgery through a natural opening is known as Natural Orifice Transluminal Endoscopic Surgery or NOTES. By avoiding major incisions through the abdomen, patients may experience a quicker recovery with less pain and scarring.

Surgeons at UC San Diego Medical Center have performed 38 of these natural orifice surgeries as part of a clinical trial comparing "scarless" to laparoscopic techniques. Patients recruited to the trial have had diseased gallbladders and appendix removed through either the mouth or vagina. A gastrectomy, an obesity surgery that reduces the size of the stomach, and the hernia repair, are also part of the clinical trial.

Members of the Department of Surgery team included Lauren Fischer, M.D., Santiago Horgan, M.D., Garth Jacobsen, M.D., Adam Spivak, Kari Thompson, M.D., and Brian Wong, M.D.

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