Surgeon Removes Kidney Through Patient’s Belly Button

Using SPIDER® Surgical System, Dr. Raymond J. Leveillee performs UHealth’s first single-incision nephrectomy

February 25, 2011

A surgeon at UHealth-the University of Miami Health System recently removed a patient’s kidney through her belly button, leaving no visible scar.

Dr. Raymond J. Leveillee, chief of the division of endourology and laparoscopy at the University of Miami Miller School of Medicine, used the TransEnterix SPIDER® Surgical System to successfully complete a nephrectomy on Joanna Armas, a 26-year-old Miami resident.

It marked the first time a South Florida surgeon performed a single-incision nephrectomy. Leveillee is one of only three surgeons in the world who has performed a single-incision nephrectomy using the SPIDER system.

Armas, a pharmacist, suffered an ureteropelvic junction obstruction, a congenital blockage in the area connecting her kidney’s renal pelvis with its ureter, the tube that moves urine to the bladder. Over time, the blockage permanently damaged the kidney.

After she began suffering increasingly frequent episodes of incapacitating pain, Armas agreed with Leveillee that it was time for her kidney to come out. She was intrigued by Leveillee’s description of the SPIDER system and how it would allow him to perform the operation entirely through an inch-long incision in her belly button, resulting in no visible scar. Traditional laparoscopic surgery would have required several incisions throughout her abdomen.

“Having some familiarity with medicine, I understood that if we could perform the surgery through one incision I would recover faster and feel better, so I wanted to do that,” she said.

Leveillee said he tried other single-incision surgical systems and found them difficult to use. Other systems didn’t substantially change the tools with which a surgeon worked; rather, the surgeon was forced to put rigid laparoscopic tools into a single incision. The result was a smaller and crowded operating field that significantly impeded the surgeon’s vision and dexterity and forced rigid instruments to stack and cross.

The SPIDER system completely changes the state of single-incision surgery. Using

the SPIDER system, Leveillee makes a small incision in the belly button, inserts the device into the abdomen and opens it like an umbrella. Expansion allows him to operate at the same angles as traditional laparoscopic surgery, and provides flexible instruments that enhance his access and dexterity. When finished, Leveillee closes the SPIDER system and removes it through the same incision.

"My initial response to single-incision surgery was that it was counter-intuitive to take angles and instruments – the advantages of traditional laparoscopic surgery – and put them into one small hole. We were using instruments in a single site that weren't designed for single site," Leveillee said. "The SPIDER system is the first single-site system with engineering that recreates optimum surgical angles inside the body cavity. It doesn't try to use older instruments for a purpose they weren't designed for. The SPIDER system represents a real progression in the evolution of surgery."

Armas said that she felt afterward hardly any discomfort at her surgical site – an experience made all the more amazing considering that her kidney was about twice the normal size.

"My belly button is healing quite well," she said. "You cannot even tell I had anything done, which is just crazy. My life is so much better now; I'm not in any pain, I can function, I can work. I am extremely grateful for Dr. Leveillee and his team – because of them, I have recovered my life."

For more information,visit http://www.uhealthsystem.com [1] and http://www.spidersurgery.com [2]

Source URL (retrieved on *12/21/2014 - 11:24pm*):
http://www.surgicalproductsmag.com/news/2011/02/surgeon-removes-kidney-through-patient%E2%80%99s-belly-button?qt-digital_editions=0

Links:
[1] http://www.uhealthsystem.com/
[2] http://www.spidersurgery.com/