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Single-Site Laparoscopic Surgery Reduces Pain of Tumor Removal



Derweesh, MD, is an expert in minimally invasive surgery.

Researchers at the University of California, San Diego School of Medicine have found that recovery from an emerging, minimally invasive surgical technique called Laparo-Endoscopic Single-Site Surgery (LESS) was less painful for kidney cancer patients than traditional laparoscopic surgery. Study results were published in the September online edition of *Urology*.

“In the largest prospective study of kidney cancer patients to date, the UC San Diego study showed less use of narcotic pain medication and lower pain scores upon hospital discharge,” said Ithaar Derweesh, MD, senior author and urologic oncologist at UC San Diego Moores Cancer Center. “For patients and surgeons, this research shows that reducing the number of incisions to one confers benefits beyond fewer scars.”

Led by Derweesh, the study compared single-site laparoscopy, also known as LESS, and traditional multiport laparoscopy in a total of 74 patients needing either complete or partial removal of the kidney for malignancy. LESS was performed with one small incision in the umbilicus through which all tools were inserted to reach the tumor. The patients undergoing traditional laparoscopy underwent four to six incisions.

After surgery, surgeons used the visual analog pain (VAP) test to establish a patient’s comfort level. The test is composed of simple line drawings of the human face. One end of the scale shows a smile and “no hurt,” the opposite end expresses tears and “hurts worst.”

“We found that patients rated the LESS surgery as 40 percent less painful than traditional laparoscopic surgery, while requiring approximately 50 percent less narcotic pain medication,” said Derweesh. “This is an excellent sign that the LESS technique may further improve the quality of life of appropriate patients undergoing major cancer surgery.”

The incidence of renal cell carcinoma is increasing worldwide. In the United States, kidney cancer is the most lethal of the commonly diagnosed urologic malignancies, diagnosed in more than 64,000 Americans every year. According to the American Cancer Society, kidney cancer is increasing at a rate of two to three percent each year in the U.S.

Additional contributors to this paper include Wassim M. Bazzi, Sean P. Stroup, Ryan P. Kopp, Seth A. Cohen, and Kyoko Sakamoto from the UC San Diego School of Medicine.

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