Improved Results For Kidney Patients With Robotic Surgery

Robotic surgery offers the same or better results than minimally invasive laparoscopic procedures for treating kidney disease, and can potentially help more patients because it is not as difficult for surgeons to learn, according to a new study led by Henry Ford Hospital specialists. The findings come at a time both when chronic kidney disease is becoming more common, and while hidden damage to kidney function has been overlooked in more than one-fourth of patients with small kidney tumors, according to earlier studies.

This chronic renal insufficiency – a condition in which damaged kidneys fail to remove enough waste from the bloodstream in the form of urine – has been linked to cardiovascular disease and other illnesses leading to hospitalization and sometimes death. Standard treatment for small kidney tumors has traditionally been radical nephrectomy – surgical removal of the entire kidney, part of the ureter, the adrenal gland, and some surrounding tissue. But with improvements in 3D imaging scans, surgeons have been able to more precisely locate these tumors, allowing them to remove only the diseased portion of the kidney. The result of such partial nephrectomy has been an overall drop in related cardiovascular problems and death.

Yet, the Henry Ford researchers note, most kidney tumor patients still undergo radical nephrectomy, often because their surgeons haven't mastered advanced laparoscopic – or "keyhole" – surgical techniques. But, according to the new Henry Ford study, robotic partial nephrectomy (RPN) may help solve this. Ford pioneered the use of robot-assisted surgery with the da Vinci Surgical System in place at its Vattikuti Urology Institute.

Lead researcher Dr. Craig Rogers is the Director of Renal Surgery at Henry Ford Hospital and has performed hundreds of robotic kidney surgeries. He performed the first robotic radical nephrectomy in Michigan in which all ports were placed through a single small incision. "RPN appears to have a shorter learning curve when compared to alternative minimally invasive techniques," according to Rogers and his team. "Recent comparative studies have demonstrated favorable-to-equivalent outcomes for RPN when compared to laparoscopic partial nephrectomy."

Because of the shorter learning curve, more surgeons may be able to master RPN, and as a result more patients might benefit from the minimally invasive technique, the study concluded. The findings were published in the January 2011 issue of the journal *Current Opinions in Urology*. Rogers was joined in the study by Dr. Shyam Sukumar, a research fellow at Vattikuti; and Dr. Inderbir S. Gill, executive director of the University of Southern California Institute of Urology, and associate dean of clinical innovation at USC's Keck School of Medicine.

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