Women fare better than men, but need more blood after kidney cancer surgery

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Women do better than men after surgical removal of part or all of a cancerous kidney, with fewer post-operative complications, including dying in the hospital, although they are more likely to receive blood transfusions related to their surgery.

But Henry Ford Hospital researchers who documented these gender differences can't say why they exist.

The results of the new study, based on population samples from throughout the U.S., will be presented this week at the American Urological Association's Annual Meeting in Atlanta.

"This is a controversial area," says Quoc-Dien Trinh, M.D., a Fellow at Henry Ford Hospital's Vattikuti Urology Institute and lead author of the study.

"While the effects of gender on the outcome of many types of surgery, including removal of the bladder, have been demonstrated and widely debated, the association between gender and surgical outcomes of nephrectomy (kidney removal) is not well understood."

Physical differences between genders can explain different outcomes in some types of surgery, and have been shown and discussed in several earlier studies, Dr. Trinh says. "But this is hard to explain for nephrectomies. There is no clear-cut anatomical difference between men and women that would explain why it's easier or harder in one sex than

the other."

Surgical removal of part or all of a diseased kidney, whether using traditional "open" techniques or less-intrusive laparoscopic procedures, is the standard of care for kidney cancer and the only curative treatment.

Using nephrectomy data from 1998 through 2007, the most recent available from the Health Care Utilization Project's Nationwide Inpatient Sample (NIS), "we tested the rates of blood transfusions, extended length of stay (beyond the median of five days), in-hospital mortality, as well as complications during and after surgery, separated by gender," Dr. Trinh says.

Of the total 48,172 cases that were identified and examined, 18,966 (39.4 percent) were female. The mean age for the women was 62.7 years; for the men, 61.8 years.

While no significant gender-related differences were found in complications during surgery and length of hospital stay after surgery, the Henry Ford Hospital researchers found that women:

- Were less likely than men (14.6 percent vs. 17.1 percent) to have complications after nephrectomy. These included digestive problems, hemorrhage, cardiac complications and infections.
- Were less likely to die while in the hospital (0.6 percent vs. 0.8).
- Were more likely to have blood transfusions than men (11.5 percent vs.9.2 percent).

The differences were most pronounced after partial removal of a cancerous kidney using open surgical techniques.

Because researchers didn't have specific data on the kidney tumors in

each individual case, exactly why these differences were found couldn't be determined, Dr. Trinh says, adding, "It is entirely possible that women have smaller tumors, so there are fewer complications."

As to the higher rates of blood transfusion in female patients, Dr. Trinh says the reason or reasons remain unknown.

"The threshold for transfusion could be different between men and women," he says. "We usually transfuse based on clinical decisions: we look at the patients, how they're doing, and make judgments. There are no clear-cut guidelines.

"In the end, women are transfused more often. Is it because they bleed more often? Are they transfused more liberally than men? We don't have the data to answer this."

While these differences remain to be explored and determined, the fact that they exist, and have now been documented, is a step forward in the treatment of kidney cancer.

"Insight into the effect of gender on major urologic oncology procedures," Dr. Trinh says, "is critical in reducing disparities in care and improving patient outcomes."

Provided by Henry Ford Health System

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