

# Robotic Procedure Shorter, Has Less Blood Loss

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KISSIMMEE, FLA. — Robotic-assisted laparoscopic hysterectomy is a safe alternative to total laparoscopic hysterectomy, offering the advantages of shorter operating room time, significantly less blood loss, and fewer conversions to open surgery, according to Dr. Khaled Sakhel. “The room time in our study was sig-

nificantly shorter in the robotic-assisted group, despite the fact that the induction time was 6 minutes longer,” he said at the annual meeting of the AAGL. “The surgeon was able to make up that lost time and more,” leaving the operating room a mean of 10 minutes sooner than surgeons who performed a total laparoscopic procedure.

Dr. Sakhel reported a prospective comparative study conducted while he was at Michigan State University, East Lansing; he has since moved to Eastern Medical School, Norfolk, Va.

The cohort consisted of 136 women (mean age 46 years) who underwent total laparoscopic hysterectomy or robotic-assisted laparoscopic hysterectomy at two Michigan hospitals. Patients were not randomized; instead, insur-

ance companies decided which hospital would be used.

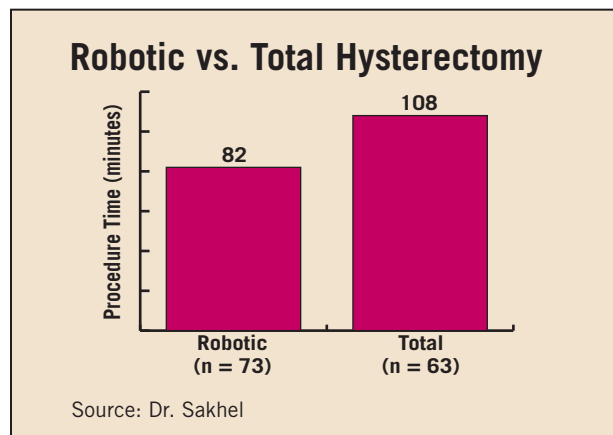
Group 1 consisted of 73 women who were assigned to a hospital that had a robotic surgical system; the 63 patients in group 2 were assigned to a hospital without such a system. The patients’ mean weight was 180 pounds. There were no significant demographic or diagnostic differences between the two groups. A single surgeon performed all the procedures.

The study examined three time outcomes in addition to clinical outcomes. Total room time was defined as “wheels in, wheels out.” Induction time was defined as “wheels in to incision time.” Procedure time was defined as incision to closure time.

Total room time was significantly less in the robotic group (125 vs. 135 minutes). Induction time was significantly longer in the robotic group (27 vs. 21 minutes), because of the additional time in docking the robotic system. Procedure time was significantly shorter in the robotic group (82 vs. 108 minutes).

Mean blood loss was significantly less in the robotic group (46 mL vs. 114 mL). There was one complication in the robotic group (a retained asepto bulb due to miscommunication among the surgical team), and two complications in the total laparoscopic group—both cystotomies. The difference in complications was not statistically significant.

Significantly more patients were discharged postoperatively on the day of the robotic surgery procedure, compared with those who had total laparoscopy (90% vs. 70%). On the second postoperative day, all of the remaining robotic surgery patients went home, compared with 93% of those remaining who underwent total laparoscopy, although this difference was not statistically significant.



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**Disclosures:** Dr. Sakhel said he had no disclosures.

## Robotic-Assisted Laparoscopic Hysterectomy Appears Safe in Morbidly Obese Women

KISSIMMEE, FLA. — Robotic-assisted laparoscopic hysterectomy appears to be feasible and safe in morbidly obese women, with intraoperative and postoperative surgical outcomes similar to those seen in women with a lower body mass index, according to Dr. Jin Hee Kim.

At the annual meeting of the AAGL, she said, “Given these findings, we feel [that] robotic-assisted laparoscopy may play a role in decreasing the technical difficulties encountered in laparoscopic surgery, especially in overweight women.” Dr. Kim presented the results of a retrospective cohort study she performed with her colleagues at the University of Michigan, Ann Arbor. Since then, she has moved to Columbia University, New York.

The study group included 157 consecutive patients who underwent robotic-assisted laparoscopic hysterectomy at a single center from 2002 to 2009. All surgical indications were benign, including fibroids, endometriosis, pain, and abnormal bleeding. The patients were divided into two groups—those with a body mass index of less than 35 kg/m<sup>2</sup> (133) and those with a BMI of 35 kg/m<sup>2</sup> or higher (24).

The only significant surgical dif-

ference was operative time, Dr. Kim said. Women in the higher-weight group had a mean operative time of 214 minutes, compared with 189 minutes in the lower-weight group.

Mean blood loss was 97 mL in the higher-weight group and 72 mL in the lower-weight group, not significantly different. There was no intraoperative organ/vascular injury in the higher-weight group, while two such injuries occurred in the lower-weight group; again, this was not a significant difference. There were no significant differences in conversion to open surgery, postoperative vaginal cuff complications, and unplanned readmission within 60 days, reoperation, or length of hospital stay.

“Although women with a BMI of 35 kg/m<sup>2</sup> or greater had a significantly longer operative time, the overall perioperative complications and conversion to laparotomy were low and similar to those among women with a BMI less than 35,” Dr. Kim said.

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**Disclosures:** Dr. Kim said she had no conflicts of interest to disclose.

## Overall Sensitivity for Endometrial Polyps 89% With Color Doppler

KISSIMMEE, FLA. — Color Doppler imaging is highly sensitive for endometrial polyps, because it can identify the feeding vessel that allows the polyp to grow, according to Dr. Pauline L. Chang.

A retrospective study of 74 women found that color Doppler had an overall sensitivity of 89% and a positive predictive value of 80% for endometrial polyps. Among only premenopausal women, the sensitivity was even better at 96%, she said at the annual meeting of the AAGL.

In fact, said Dr. Chang of Stanford (Calif.) University, the test’s diagnostic values are so good that a positive color Doppler should eliminate the need for second-line testing.

“For women with a positive transvaginal color Doppler, additional imaging, such as saline-infusion sonohysterography, is not necessary for confirmation before proceeding to definitive management with hysteroscopy,” she said.

All 74 of the women in the study had undergone a transvaginal pelvic sonogram that suggested endometrial polyps. However, color Doppler imaging revealed vascularity in 64 patients, and hysteroscopy confirmed this finding in 51 of them.

There were 13 false-positive results, which hysteroscopy confirmed as normal in five women, fibroids in seven, and a dense adhesion in one. Thus, Dr. Chang said, “vascularity on Doppler imaging had a sensitivity of 89.5% and a positive predictive value of 80% for detection of endometrial polyps.”

Dr. Chang then divided the group into premenopausal and postmenopausal women. For the 61 premenopausal women who had evidence of endometrial polyps on transvaginal ultrasound, color Doppler found vascularity in 55; there were 11 false positives confirmed by hysteroscopy. For this group,

the sensitivity of color Doppler for endometrial polyps was 96%, and the positive predictive value was 80%.

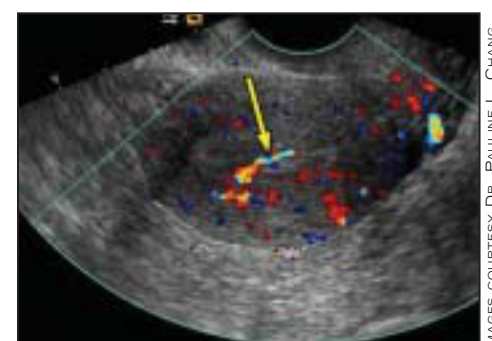
In the group of 13 menopausal women, color Doppler identified 9 with vascular polyps; there were two false positives, Dr. Chang reported. For the menopausal group, Doppler had a sensitivity of 67% and a 78% positive predictive value.

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**Disclosures:** Dr. Chang said she had no relevant financial disclosures.



**A focal abnormality on grayscale ultrasound suggests an endometrial polyp.**



**Color Doppler reveals vascularity, increasing the suspicion of a polyp.**

IMAGES COURTESY DR. PAULINE L. CHANG