

BLADDER CANCER

Fewer complications
after robotic cystectomy?

Patients whose cancerous bladder was removed using a surgical robot experienced fewer postoperative complications than those who underwent open cystectomy, report Douglas Scherr and colleagues.

Robotic radical cystectomy is an investigational procedure that is less invasive than traditional open surgery. Use of a surgical robot has been associated with reduced intraoperative blood loss and shorter length of hospital stay. Published complication rates for robotic radical cystectomy vary widely, however. The study by Scherr *et al.* is the largest to have systematically and prospectively compared the postoperative complications that occur after each type of surgery.

A total of 187 radical cystectomies were performed by a single surgeon; 104 open, and 83 robotic. Data on complications at 30 days and 90 days were collected using a modified Clavien classification system.

At 30 days, the overall complication rate was higher in the open group (59%, compared with 41% in the robotic group); there were also more major complications in the open group (30%, versus 10% in the robotic group). At 90 days, the overall complication rate in the open group was again higher (62% versus 48% in the robotic group), but this difference did not attain statistical significance. The rate of major complications, however, was

significantly higher in the open group at 31%, versus 17% in the robotic group.

Logistic regression analysis showed robotic cystectomy to be an independent predictor of fewer complications (major and overall) at both 30 days and 90 days. Infection was the most common complication, followed by gastrointestinal and cardiac problems. The types of complications were similar in both groups.

Previous studies have been criticized for selecting patients for robotic surgery who are younger, healthier, and have a lower disease burden. The authors of the current study report that, as their experience with robotic technology increased, they more confidently used this approach in patients with advanced bladder cancer and comorbid conditions, thereby lessening the influence of selection bias. Scherr asserts that “most of the patients we treat are men in their fifties and sixties with significant underlying medical problems.” They report that the patients in their robotic and open groups were well matched in terms of body mass index, American Society of Anesthesiologists score, Charlson Age Comorbidity Index score, history of previous abdominal surgery, and extent of organ-confined disease.

“We have taken an operation with incredibly high morbidity and dropped it by half” comments Scherr. “This equates



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to major cost savings; an example of an expensive technology diminishing costs for a change.” In an Editorial Comment that accompanies Scherr and colleagues’ *European Urology* paper, Georgios Gakis and Arnulf Stenzl from Eberhard-Karls University in Germany caution against extrapolating these findings to other institutions. “Certain centers with high-volume open cystectomy...reported better results regarding surgery time as well as short- and long-term complications” [relative to robotic cystectomy]. Scherr *et al.* concede that the robotic approach should retain its investigational status until long-term follow-up shows the oncologic safety of robotic cystectomy to be comparable to that of the open approach.

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Original article Ng, C. K. *et al.* A comparison of postoperative complications in open versus robotic cystectomy. *Eur. Urol.* **57**, 274–282 (2010)