NEW YORK (Reuters Health) Feb 09 - Surgeons from Weill-Cornell Medical College in New York City say single-incision colon surgery is practical and safe, based on their findings in a systematic review.

Most of the 23 papers they reviewed were case studies, however, with only five true comparisons of single-incision surgery to standard laparoscopic surgery and no randomized trials.

So while single-incision colectomy may be safe, whether it's better than conventional procedures isn't at all clear, the researchers admit. And it's technically difficult.

Altogether, the studies included 378 patients who had single-incision laparoscopic colectomy, according to a report online February 4 in Annals of Surgery.

Body mass index ranged from 20.9 to 30.0 kg/m2, reflecting the highly selected nature of the patients. Nearly all incisions were less than 5 cm.

Close to 75% of the procedures were right hemicolectomies. Surgeries lasted from 83 to 225 minutes, with modest blood loss. Rates of conversion to open procedures were low.

For cancer cases, all resection margins were clear and 13 to 27 lymph nodes were removed. Perioperative mortality and morbidity were low, with two deaths (0.5%) and 45 patients (12.9%) with complications.

Time to return of gastrointestinal function was reported in only six studies and was similar to that of conventional laparoscopic surgery. Postoperative lengths of hospital stay were similar as well.

Dr. Sang W Lee, the senior author on the paper, told Reuters Health that single-incision laparoscopic colectomy is technically difficult, especially for sigmoid colectomies. This is due to the "inability of the surgeon to optimally triangulate the instruments since the specimen is farther from the incision in most cases."

Still, Dr. Lee believes, any general or colorectal surgeon who has done a sufficient number of laparoscopic colon resections can learn to do single-incision colectomy. But the procedure is not suitable for most surgeons, he said, "because at present, only about 20% of all colon surgery is being done laparoscopically."

Dr. Anthony J. Senagore, who is chief of colorectal surgery at the University of Southern California and was not involved in the new study, told Reuters Health by email that single-incision laparoscopic colectomy, "requires excellent straight laparoscopic skills. It would be a challenging transition from hand-assisted laparoscopic colectomy."

Dr. Lee said that in his experience, "Patients who undergo single-incision laparoscopic colectomy seem happier with the cosmetic appearance of their incisions than the standard laparoscopic resection patients."

But Dr. Senagore disagreed. "The cosmetic benefit is more imagined than real," he said. "In most patients, I have a tough time finding my trocar sites."

He has reservations. "We need to perform higher quality comparative effectiveness studies of technologies. In
skilled hands, single-incision colectomy is safe and efficacious but requires better cost and outcome data," he said.

Along the same lines, Dr. Lee and his colleagues say, "There may be potential benefits" of single-incision colectomy over laparoscopic or hand-assisted laparoscopic operations, "but it is yet to be proven objectively."

At any rate, Dr. Lee said he doesn't expect single-incision laparoscopic colectomy to become the standard for all patients, because it takes longer. He feels it is ideal for "young patients, women and those with Crohn's disease."


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