Laparoscopic Bypass Offers Advantages

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SAN DIEGO — Obese patients who underwent laparoscopic gastric bypass surgery had significantly lower rates of bleeding and venous thromboembolic events than those who had open gastric bypass surgery, results from a review of 1,128 patients showed.

"Probably more important than any type of mechanical compression or chemical prophylaxis [in preventing bleeding and venous thromboembolic events] is our emphasis on getting patients out of bed on postoperative day zero," Dr. Christopher J. Northup said at the annual meeting of the American Society for Bariatric Surgery, where he presented the results of his retrospective, nonrandomized study. "That's probably where a lot of the difference has come from."

Getting patients out of bed on postoperative day zero is important for prevention of bleeding.

DR. NORTHUP

He and his associates at the University of Virginia, Charlottesville, used medical records to identify the rates of bleeding and venous thromboembolic events in patients who underwent laparoscopic and open gastric bypass surgery between 1995 and 2005.

The average age of the 363 patients in the open gastric bypass group was 40, and their average body mass index (BMI) was 55 kg/m^2. For the 765 patients in the laparoscopic gastric bypass group, the average age was 43 and the average BMI was 51 kg/m^2. Patients were excluded from the analysis if they were on long-term anticoagulants, had chronic deep vein thrombosis (DVT), or were converted from a laparoscopic to an open procedure.

Both groups of patients followed the same weight-based enoxaparin prophylaxis protocol. Patients who weighed less than 300 pounds received 30 mg enoxaparin every 12 hours. Those who weighed 300-400 pounds received 30 mg in the morning and 60 mg in the afternoon, and those who weighed more than 400 pounds received 60 mg every 12 hours.

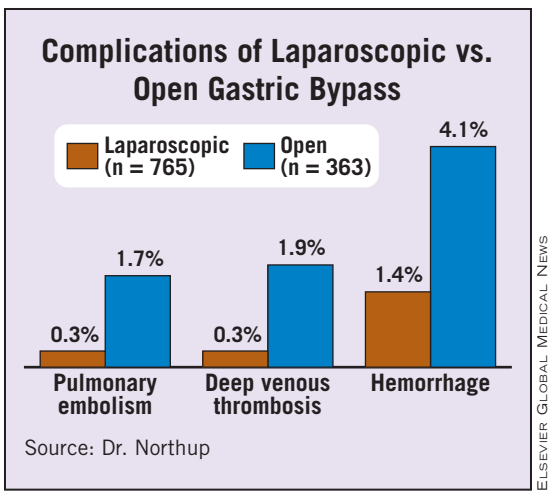
The first dose of enoxaparin, given while the patient was still in the preoperative holding area, was continued through each patient's hospital stay. Lower extremity compression devices were used intraoperatively and postoperatively in all patients.

The rate of hemorrhage was 4.1% in the open-surgery group (15 patients), compared with 1.4% in the laparoscopic group (11 patients). Deep venous thrombosis occurred in seven patients in the open group (1.9%), compared with two patients in the laparoscopic group (0.3%). Pulmonary embolism (PE) occurred in six patients in the open group (1.7%), compared with two patients in the laparoscopic group (0.3%). All differences were statistically significant.

There was one fatal PE in the laparoscopic group. "All of the thromboembolic and bleeding events occurred during primary procedures," said Dr. Northup of the surgery department at the University of Virginia. "None of these events happened during reoperation for small bowel obstruction or for other reasons.

"In dealing with the small complication rates of PE and DVT, this still remains a relatively small study population," he noted. Another limitation was that no routine lower-extremity duplex ultrasound examinations were done, so "we likely missed several deep venous thromboses," he said.

One meeting attendee asked Dr. Northup to clarify how he and his associates arrived at the enoxaparin dosing used in the study. "I don't think there is any good literature to say what protocol is best," he replied. "Ours was based upon experience. This is what we use." ■



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