Endovascular Beats Open Surgical Repair for AAA

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SCOTTSDALE, ARIZ. — Endovascular repair of abdominal aortic aneurysms was associated with fewer perioperative complications than was open repair in a large study based on Medicare data.

At an international congress on endovascular interventions sponsored by the Arizona Heart Institute, Dr. James F. McKinsey reported on 174,974 patients who had open repair and 38,629 patients who underwent endovascular repair. In the open surgery group, 30-day mortality was over 2.5 times greater than in the endovascular group, a significant difference. (See box.)

Also, endovascular repair was associated with fewer peripheral vascular complications (1.6% vs. 3.3%), a lower incidence of postoperative shock (0.1% vs. 0.4%), and fewer infections (0.7% vs. 2.9%).

Endovascular repair was associated with significantly fewer gastrointestinal, pulmonary, renal, neurologic, cardiac, and surgical complications.

The mean length of hospital stay (3 days vs. 9 days) also strongly favored the endovascular group.

Device malfunction was the only complication that was significantly greater in the endovascular group, compared with the open surgery group (3.0% vs. 1.1%).

"The people undergoing endovascular repair were a sicker group to start with," said Dr. McKinsey, of Columbia University Medical Center, New York. They tended to have elevated lipid levels as well as a higher incidence of diabetes, hypertension, coronary artery disease, and cerebrovascular disease.

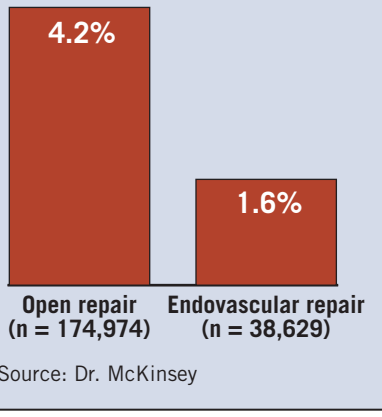
In recent years, several controlled clinical trials arrived at the same conclusion: that endovascular repair of abdominal aortic aneurysms (AAA) is superior to open repair. "The difficulty with these trials is that they were generally done in centers of excellence that are really geared toward endovascular repair, and may not reflect the average commonday experience in the United States," Dr. McKinsey said.

Using the full Medicare database has several advantages. Information from 41 million patients is included, and this allows detailed subgroup analysis to be conducted while retaining statistical power. Furthermore, the use of unique patient identifiers makes longitudinal studies possible, even when patients are seen at more than one hospital.

On the other hand, patients in this database are not randomly assigned to a treatment, diagnostic codes are not uniformly consistent, and some desirable data—such as test results—are absent.

The study included patients with diagnostic codes indicating primary or secondary diagnoses of AAA with or without rupture.

There were several exclusion criteria, including ruptured thoracic aneurysm, ruptured thoracoabdominal abdominal aneurysm, and complications resulting from other vascular devices, implants, or grafts. ■



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'I have to say things are going to get worse here before they get better.'

Dr. Ian Gould, on the rising prevalence of MRSA-associated community-acquired pneumonia, p. 43

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