

Less invasive procedure for repair of abdominal aortic aneurysm may reduce short-term risk of death

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Patients who received the less-invasive endovascular repair of an abdominal aortic aneurysm had a lower risk of death in the first 30 days after the procedure compared to patients who an open repair, but both procedures had similar rates of death after two years, according to a study in the October 14 issue of *JAMA*, a theme issue on surgical care.

Frank A. Lederle, M.D., of the Veterans Affairs Medical Center, Minneapolis, presented the findings of the study at a *JAMA* media briefing in Chicago.

"Each year in the United States, 45,000 patients with unruptured abdominal [aortic aneurysm](#) (AAA) undergo elective repair, resulting in more than 1,400 perioperative [the first 30 days after surgery or inpatient status] deaths," according to background information in the article.

Endovascular repair, performed through a [catheter](#) inserted into an artery, was developed to provide a less invasive method than the standard open procedure, which involves an abdominal incision. But "limited data are available to assess whether endovascular repair of AAA improves short-term outcomes compared with traditional open repair," the authors write.

Dr. Lederle and colleagues are conducting a multicenter clinical trial to examine outcomes after elective endovascular and open repair of AAA. This is an ongoing 9-year trial, with this interim report including postoperative outcomes of up to 2 years for 881 patients (age 49 years or older). Patients were randomized to either endovascular (n = 444) or open (n = 437) repair of AAA. Average follow-up was 1.8 years.

The researchers found that the rate of death after surgery was significantly higher for open repair at

30 days (0.2 percent vs. 2.3 percent), and at 30 days or during hospitalization (0.5 percent vs. 3.0 percent). But there was no significant difference in all-cause death at two years (7.0 percent vs. 9.8 percent), and death after the perioperative period was similar in the two groups (6.1 percent vs. 6.6 percent).

Patients in the endovascular repair group had reduced procedure time, blood loss and duration of mechanical ventilation. "[Hospital](#) and ICU stays were shorter with endovascular repair and need for transfusion was decreased. No significant differences were observed in major morbidities, secondary procedures, or aneurysm-related hospitalizations," the authors write.

"Longer-term data are needed to fully assess the relative merits of the 2 procedures."

More information: *JAMA*. 2009;302[14]:1535-1542.

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