Is open aortic aneurysm repair becoming an endangered art?

NATIONAL TRENDS IN OPEN SURGICAL, ENDOVASCULAR, AND BRANCHED-FENESTRATED ENDOVASCULAR AORTIC ANEURYSM REPAIR IN MEDICARE PATIENTS

CHICAGO, Illinois, June 2018 – A review of Medicare data reveals that the open surgical repair of abdominal aortic aneurysm (AAA) is becoming quite rare and may no longer adequately serve as a benchmark of hospital quality.

Successful open surgical repair of AAA is a time-honored procedure that signifies a surgeon’s skill and a hospital’s commitment to quality patient care. Given the outcomes of this complex procedure are easily determined, open AAA is a standard measure for hospital quality. Furthermore, the number of open repairs performed annually serves as an important metric used by surgical applicants to compare one training program to another.

With the advent of endovascular aneurysm repair (EVAR) over the past several decades, along with more recent technical advances that now allow for more complex aneurysms to be treated with branched-fenestrated devices, it is not surprising that the rate of open AAA repair is declining. The important question now is, has this decline become so drastic that open AAA can no longer serve as a relevant marker for hospital quality, or program discrimination for trainees?

As reported in the June 2018 edition of the Journal of Vascular Surgery, researchers from the Dartmouth-Hitchcock Medical Center led by vascular surgeon Dr. Bjoern Suckow, evaluated the trends in AAA treatment strategies over the past decade. Using Medicare data, they determined the rates of AAA repairs performed between 2003 and 2013. The results of their investigation reveal:

- AAA repair overall has declined 26% (31,582 to 23,421)
- Open AAA repair has fallen 76% (20,533 to 4,916)
- Endovascular AAA repair peaked in 2011 (11,049 to 19,247) and has since declined 15% (16,362 in 2013)
- Branched-fenestrated endovascular AAA repair has increased (335 in 2011 to 2143 in 2013)

Additionally, their research revealed that mortality rates following aneurysm repair have improved despite worsening patient comorbidities. Specifically, they found that mortality following:

- Open AAA (all types, including paravisceral) is 10-12%
- Endovascular AAA is 2-3%

In breaking the data down regionally, the study demonstrated that more than a third of regions of the United States
failed to perform enough open aortic aneurysm cases to meet regional reporting criteria according to Medicare privacy standards (which require 10 cases per year). Dr. Suckow notes that “these data suggest open AAA repair is now performed too infrequently to be used as a metric in the assessment of hospital and surgeon quality in cardiovascular care.”

“Vascular surgeons, quality assessment experts, and surgical educators all need to consider the effect of these changes on the best measure performance of vascular surgery as well as in training of the next generation of invasive vascular specialists,” concludes Dr. Suckow.

While this trend is obviously favorable with regards to patient care, it poses several questions as to the future of open surgical repair. Will there be enough cases to train vascular surgeons to perform this procedure? Will patients not suitable for EVAR need to travel to centers of excellence for their care? The information in this article provides important keys for vascular surgery to plan ahead and answer these questions.

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Regarding AAA:
https://vascular.org/patient-resources/vascular-conditions/abdominal-aortic-aneurysm
Regarding endovascular AAA repair:

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