EVAR: are we going too far?

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Disclosure

Frank J Criado

I have the following potential conflicts of interest to report:

MEDTRONIC: Consulting, Speaking, Training
EVAR: are we going too far?

1. Off-label use
2. Small aneurysms
3. Very short life expectancy
EVAR: are we going too far?

1. Off-label use – anatomy (proximal neck)
6m follow-up
After re-intervention with placement of proximal cuff to SMA and bil renal chimneys
Does compliance with IFU predict outcomes?

Measure of Successful Aneurysm Repair: Absence of Sac Enlargement at 5y Follow-up

<table>
<thead>
<tr>
<th>Freedom from Sac Growth</th>
<th>&gt;5mm</th>
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<tbody>
<tr>
<td>OP DATE</td>
<td></td>
</tr>
<tr>
<td>1999-2003</td>
<td>98.7%</td>
</tr>
<tr>
<td></td>
<td>89.4%</td>
</tr>
<tr>
<td></td>
<td>74.3%</td>
</tr>
<tr>
<td>2004-2008</td>
<td>96.7%</td>
</tr>
<tr>
<td></td>
<td>81.0%</td>
</tr>
<tr>
<td></td>
<td>38.4%</td>
</tr>
</tbody>
</table>

Schanzer, Circulation 2011
2. Small aneurysms
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2. Small aneurysms

70y man morbidly obese
Asymptomatic AAA 4.9cm
Essentially juxtarenal
Serious technical complications during EVAR
Converted to open repair
Died 48hrs post-op
Management of Abdominal Aortic Aneurysms
Clinical Practice Guidelines of the European Society for Vascular Surgery

F.L. Moll a,*, J.T. Powell b, G. Fraedrich c, F. Verzini d, S. Haulon e, M. Waltham f, J.A. van Herwaarden a, P.J.E. Holt g, J.W. van Keulen a,h, B. Rantner c, F.J.V. Schlösser h, F. Setacci i, J.-B. Ricco j

Table 4 12-month AAA rupture risk by diameter.8,82–84

<table>
<thead>
<tr>
<th>AAA Diameter</th>
<th>Rupture Risk (%)</th>
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<tbody>
<tr>
<td>30–39</td>
<td>0</td>
</tr>
<tr>
<td>40–49</td>
<td>1</td>
</tr>
<tr>
<td>50–59</td>
<td>1.0–11</td>
</tr>
<tr>
<td>60–69</td>
<td>10–22</td>
</tr>
<tr>
<td>&gt;70</td>
<td>30–33</td>
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</tbody>
</table>

AAA, abdominal aortic aneurysm.
Average **rupture risk** per year:

- 1.0% in male pts with AAA 5.0-5.9cm
- 3.9% in females with AAA of same size (4x)
- 14.1% in males with AAA 6.0cm or larger
- 22.3% in females with AAA of that size

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The risk of rupture in untreated aneurysms: The impact of size, gender, and expansion rate

Peter M. Brown, MD, David T. Zelt, MD, and Boris Sobolev, PhD, *Kingston, Ontario, Canada*

**Objective:** The purpose of this study was to establish the risk of rupture as related to size of abdominal aortic aneurysm (AAA), gender, and expansion of the aneurysm.

**Methods:** Between 1976 and 2001, 476 patients with conditions considered unfit for surgery with AAA 5.0 cm or more were followed with computed tomographic scans every 6 months until rupture, surgery, death, or deletion from follow-up. Surgery was performed for rupture (n = 22), improved medical condition (n = 37), increase in size (n = 95), symptoms (n = 17), and other reasons (n = 24).

**Results:** Fifty ruptures occurred during the follow-up period. The average risk of rupture (and standard error) in male patients with 5.0-cm to 5.9-cm AAA was 1.0% (0.01%) per year, in female patients with 5.0-cm to 5.9-cm AAA was 3.9% (0.15%) per year, in male patients with 6.0-cm or greater AAA was 14.1% (0.18%) per year, and in female patients with 6.0-cm or greater AAA was 22.3% (0.95%) per year.

**Conclusion:** The risk of rupture in male patients with AAA 5.0 to 5.9 cm is low. The four-time higher risk of rupture in female patients with AAA 5.0 to 5.9 cm suggests a lower threshold for surgery be considered in fit women. The data regarding risk of rupture in patients with AAA 6.0 cm or more may allow more appropriate decision analysis for surgery in patients with unfit conditions with large AAA. (*J Vasc Surg* 2003;37:280-4.)
3. Short life expectancy

<6 months

(many pts are clearly better off left alone, regardless of aneurysm size...)
EVAR Evolution:
it has increasingly become – mostly – a question of **how to treat** but only rarely **whether** repair is the best course of action for a given patient in his/her proper clinical context
EVAR is great indeed, and getting better
BUT…
It’s only great when anatomy is favorable and devices are used on label!
EVAR is great indeed, and getting better 
BUT...
It's only great when anatomy is favorable and devices are used on label!
And these 2 valuable Rx options ought to be considered more often than they are:
  - Open surgical repair (for medically fit patients)
  - No repair
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