EVAR is durable treatment for mycotic AAAs – sometimes: Other adjuncts and surveillance are vital: Results of a European multicenter study

Anders Wanhainen
Professor of Surgery
Dep. of Vascular Surgery
Uppsala University
Sweden

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Anders Wanhainen
Professor of Surgery
Dep. of Vascular Surgery
Uppsala University
Sweden

Mycotic (infected) aortic aneurysm

A rare and life-threatening disease with poor prognosis;
- Co-morbidities (immunodeficiency)
- Coexisting sepsis
- High rupture rate
- Hostile anatomy
- Conventional OR associated with high mortality (20-40%) and morbidity

EVAR for MAA?

- The infected tissue is not resected → reinfection, recurrent sepsis, infection of the endoprosthesis
- Less invasive → reduced operative mortality and morbidity, especially in surgical-high-risk patients
- Hostile anatomy
- Bridge to open surgery

Reports on EVAR for MAA have shown promising results
However, only small single center case-series with limited follow-up

European multicentre study
16 centres from 8 countries

123 EVAR-treated MAA patients with 130 MAA

- Age 70 years (range 39 – 86)
- Rupture
- Immunosuppressed
- Ascending / Arch
- Descending aorta
- Para/paravisceral aorta
- Infrarenal aorta
- Multiple locations
- TEVAR
- f/b EVAR
- EVAR
- Adjunctive endovascular procedure (5)
- Adjunctive open procedure (11)
23/123 (19%) had a fatal MAA-related complication
After up till 12 years follow-up (mean 3 years)

20% within 12 months

Non-salmonella positive blood culture:
- 5-year survival 41%
- 50% deaths infection-related

Salmonella positive blood culture:
- 2/3 deaths occurred within 90 days
- 5-year survival among those surviving 90-days was 90%

Periaortic / intrathrombus gas:
- 5-year survival 36%
- All deaths were infectious related
- 83% presented with rupture

Immunodeficiency:
- 5-year survival 40%
- 64% deaths were infection-related

17% required reoperation
- 6 patients (5%) were later converted to open repair within a timespan of 3-days to 15-months (2 survived);
  - graft infection (n=2)
  - aorto-enteric fistula (n=1)
  - type I endoleak (n=1)
  - recurrent MAA (n=1)
  - unknown cause (n=1)
- 13 patients (11%) required endovascular reoperation within a timespan of 1-day to 24-months (11 survived);
  - type I endoleak (n=9)
  - type II endoleak (n=2)
  - type III endoleak (n=2)

EVAR of MAA is feasible and for most patients a durable treatment option

However;
- late infection-related complications do occur, are often lethal ……
- and warrant long-term antibiotic treatment and follow-up ……
- especially in patients with non-Salmonella positive blood culture and/or with periaortic gas formation
- In these cases, EVAR could be considered a palliative option or a bridge to later elective open repair
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