With mycotic AAAs there has been a paradigm shift in treatment: a propensity score matched multicenter study shows that EVAR is better than open repair as a durable or bridge treatment.

Anders Wanhainen
Professor of Surgery
Chief dep. of Vascular Surgery
Uppsala University Hospital
Sweden

I do not have any potential conflict of interest

Anders Wanhainen
Professor of Surgery
Chief dep. of Vascular Surgery
Uppsala University Hospital
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 open radical surgery associated with high mortality (20-40%) and significant morbidity

EVAR for MAA?
- The infected tissue is not resected → reinfecƟon, 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 (also true for open repair), and no comparative studies

Two recent studies on MAA
... and one dissertation

Swedish nationwide study
MAA 1994 – 2014

All AAA repairs registered in Sweden 1994-2014
N=21,184
Registered as infected AAA
N=184
MAAA included in the analysis
N=132
Open repair
N=62
EVAR
N=70

Excluded:
- Incomplete case charts, n=9
- Graft infection / AE-fistulae, n=15
- Non-aortic infection, n=6
- Aortic ulcer , n=3
- Aortitis, n=2
- Mean age 70 years
- 85% immunosuppressed (pneu, fever, chock)
- 85% rupture
- 80% infrarenal
- 10% paravisceral
- 60% positive blood culture

Circulation. 2016;134:1822–1832
Swedish nationwide study  
MAAA 1994 – 2014

- EVAR, n=70  
- Open repair, n=62

Circulation. 2016;134:1822–1832

Repair techniques

Open repair (n=62)
- Aortic resection with extra-anatomic bypass (n=7)  
- In-situ reconstruction (n=50)  
- Patch plasty (n=3)  
- No reconstruction / intra op death (n=2)

EVAR (n=70)
- Standard EVAR (n=55)  
- f/b-EVAR (n=8)  
- Visceral deviation with stenting (n=7)

Circulation. 2016;134:1822–1832

KM estimated survival
crude and propensity score-weighted

1 year 84% vs 73%
Open repair x7

3 months 96% vs 74%

5 year 58% vs 60%

A8x6 months x1/3

No difference in long-term infection-related complication / death or in re-operation

Circulation. 2016;134:1822–1832

A paradigm shift in treatment of MAA with EVAR being the preferred treatment modality

- EVAR for MAA is associated with better short-term survival in comparison with open repair, and ...  
- ... comparable long-term results in terms of survival and infection-related complications and re-interventions  
- Also, more patients are being offered treatment after the introduction of EVAR
- EVAR is an acceptable alternative to traditional open repair for the treatment of MAAs

Circulation. 2016;134:1822–1832