EVAR should be the FIRST choice
In treating Myotic AAAs:
Based on a 10-Year experience

Boonprasit Kritpracha, MD
Dhanakom Premprabha, MD
Pong Juntarapatin, MD
Wittawat Tantarattanapong, MD
Suttip Saemu, MD
Sorasak Rukapras, MD
Prince of Songkla University
Hat Yai, Thailand

Disclosure
Medtronic, Endologix

Infected Aortic Aneurysms
We are dealing with 2 problems
1) Aortic infection
2) Weakened aortic wall that leads to rupture.

Most common causes of death are
Ruptured aneurysm
Sepsis


I. Medical treatment alone - >50% MR.

II. Surgical treatment ?

1983 - 2008
10 patients – open repair
In-situ graft with homograft
Hospital mortality 0%

Open repair with LOW morbidity & mortality?

Infected Aortic Aneurysms

I. Medical treatment alone - >50% MR.
II. Surgical treatment – 30+% MR.


Infected Aortic Aneurysms

I. Medical treatment alone - >50% MR.
II. Surgical treatment – 30+% MR.
III. Endovascular therapy ?


Retrospective study, 11 years (Jan 2000 – Dec 2010)
7 patients – EVAR + medical treatment
Hospital mortality 0%

Sorelius K., et al; Circulation 2014:130:2136 - 2142

1999 – 2013
16 centers, 123 patients
4 Ascending/Arch
34 Descending
15 Paravisceral
71 AAA
6 Multiple
43 TEVAR
9 Fen/branched EVAR
71 EVAR

30-d Hospital mortality 9%

Endovascular Treatment of Mycotic Aortic Aneurysms
A European Multicenter Study

Most currently: > 60% of infected aortic aneurysm patients treated with EVAR

Paradigm shift in Sweden !
EVAR for Infected Aortic Aneurysms

123 patients

Non-fistula group 104

Fistula group 19

Microbial aortitis
Infection of preexisting aortic aneurysm

Clinical presentations

Non-fistula group

(n = 104)

Leakage 76%

Caval thrombosis
Vertebral erosion

Clinical presentations

September 2005 – 2017
Endovascular therapy of infected aortic aneurysms

123 cases: 96 males, 25 females
average age 65.5 years (39-90)
Excluded previous aortic surgery

Prince of Songkla University
Hat Yai, Thailand

Sorelius K., et al; Circulation 2016: 134:1822-1832

Clinical presentations

Non-fistula group

Periaortic inflammation 97%

Thoracic aorta
26
Abdominal aorta
84
Thoracic & Abdominal
10
Thoraco-abdominal
10

Clinical presentations

Caval thrombosis
Vertebral erosion

Non-fistula group

(n = 104)
Organisms

- Salmonella: 37%
- S. aureus: 22%
- Burkholderia pseudomallei: 17%
- E. coli: 9%
- Klebsiella spp: 3%
- Streptococcus spp: 9%
- Mycobacterium: 3%

RESULTS

In-hospital mortality – 9.8% (12/123)

<table>
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<tr>
<th>Non-fistula group (n = 104)</th>
<th>Fistula group (n = 19)</th>
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<tr>
<td>In-hospital mortality</td>
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<td>5.7% (6/104)</td>
<td>32% (6/19)</td>
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Aorto-esophageal fistula has the worst outcome
MR 67% (4/6)

Good long-term follow up

- 74 year-old male
- 58 year-old male
- 42 year-old male, HIV +
Simultaneous treatment of thoracic & abdominal aorta: 3 cases (no spinal cord ischemia)

Pre-op
1-year PO
3-year PO
4.5-year PO

Chimney celiac & SMA
Sandwich R & L renals

Large leakage of infected aneurysm, just above celiac axis

EVAR
Chimney celiac & SMA
Sandwich R & L renals

Infected Thoracoabdominal Aorta
Aortic stent graft with 4 chimps

75 yo male, septic knee (salmonella)
Infected Arch Aneurysm

Follow-up: 1 – 128 months
average, 32 months
No disease recurrence
No stent graft infection

Carotid - carotid, carotid - LSA bypasses
TEVAR + Chimney innominate a.

EVAR for Infected Aortic Aneurysms
Male, 58 yr, Salmonella septicemia, CHF

Aorto-caval fistula

Pre-op  Post stent graft

Clinical – not improved
CT study – not improved

2-week PO  3-week PO

Explantation of the stent graft
+ Axillo-bifemoral bypass graft

Inadequate proximal anchoring site

Inadequate distal anchoring site

8-month post-op

Infected Aortic Aneurysms

I. Medical treatment alone - >50% MR.

II. Surgical treatment – 30+% MR.

III. Endovascular therapy - <10% MR.
CONCLUSIONS

EVAR + long-term ATBs are effective for mycotic AAs, in both SIMPLE and COMPLEX anatomies.

EVAR should be the first choice of treatment for Mycotic Aortic Aneurysms.