EVAR should be the first choice treatment for Infected Aortic Aneurysms

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Disclosure

Medtronic

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Endovascular therapy of infected aortic aneurysms

Excluded previous aortic surgery

90 cases: 72 males, 18 females
average age 64 years (39-8)

I. Antibiotics alone does not work.
MR > 50%

II. Endovascular therapy is the best choice

EVAR for Infected Aortic Aneurysms
90 patients

Non-fistula group 74
Microbial aortitis
Infection of preexisting aortic aneurysm

Fistula group 16
6 Aorto-bronchial
4 Aorto-enteric
4 Aorto-esophageal
2 Aorto-caval

Clinical presentations

Non-fistula group
(n = 74)

Periaortic inflammation
96%
Clinical presentations

Non-fistula group (n = 74)

Leakage 75%

Non-fistula group

Caval thrombosis

Vertebral erosion

Organisms

Salmonella 32%
Burkholderia pseudomallei 19%
S. aureus 19%
E. coli 6%
Klebsiella spp 3%
Streptococcus spp. 9%
Mycobacterium 3%

RESULTS

Total in-hospital mortality – 11% (10/90)

Non-fistula group (n = 74)

In-hospital mortality 7% (5/74)

Fistula group (n = 16)

Aorto-esophageal fistula has the worst outcome
MR 75% (3/4)

RESULTS

Non-fistula group (n = 69)

@ 6-month follow-up: CT studies

"Significant shrinkage of aneurysm / inflammation"

IN EVERY CASE

Continue to do well during the follow-up

Good long-term follow up

Pre-op, 73 yo, M

1-mo PO

1-year PO

2-year PO

3-year PO

4-year PO

5-year PO

6-year PO

7-year PO

8-year PO

9-year PO
Good long-term follow up

1-year PO

3-year PO

Simultaneous treatment of thoracic & abdominal aorta: 3 cases (no spinal cord ischemia)

Large leakage of infected aneurysm, just above celiac axis

EVAR
Chimney celiac & SMA
Sandwich R & L renals

Pre-op
1-year postop
Infected Thoracoabdominal Aorta

Aortic stent graft with 4 chimps

Celiac, SMA
2 renals

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

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

EVAR for Infected Aortic Aneurysms

Follow-up: 1 – 116 months
average, 30 months
No disease recurrence
No stent graft infection

1 Explantation in the fistula group

Our Approach

IV Antibiotics

T/EVAR
Pain: Immediately improved
Fever: subsided within 3-5 days

CT

2 weeks

Oral Antibiotics

Lifelong
Male, 58 yr, Salmonella septicemia, CHF
Aorto-caval fistula

Clinical – not improved
CT study – not improved

2-week PO
3-week PO

Post stent-graft

Pre-op

Explantation of the stent graft + Axillo-bifemoral bypass graft

Inadequate proximal anchoring site

Last follow up Nov 1, 2015: 9 years

Inadequate distal anchoring site

8-month post-op

EVAR for Infected Aortic Aneurysms
Effective
Good long-term results
Good for complex anatomies
It can be used as the Bridging Procedure.
CONCLUSIONS

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

Good short-term and long-term results.

Endovascular therapy should be the first choice treatment for Infected Aortic Aneurysms.