Aortic Graft Infection after Fenestrated-Branched Endovascular Aortic Aneurysm Repair

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Background

Fenestrated-branched endovascular aortic repair (FBEVAR) is an established alternative for complex aortic and TAAA. Aortic graft infection (AGI) is a rare complication with a high risk of mortality. Endograft explantation is the definitive treatment but may be a formidable procedure after FBEVAR. This study aims to assess the management and outcomes of AGI after FBEVAR

Methods

A retrospective study was performed of 406 patients undergoing FBEVAR between 2015 and 2023. PS CMDs and off-the-shelf endografts were used. The primary endpoints were the occurrence of AGI, patient survival, and adverse events

Table I. Demographics characteristics of patients with aortic graft infection.

Variables	N= 6
Age, mean	71 ± 6.8
Gender, male	1 (16)
Aneurysm maximum diameter, mm	63.7 ± 23
Staged TEVAR	3 (50)
PS-CMD	2 (33)
t-Branch	4 (67)
BMI	24 ± 4

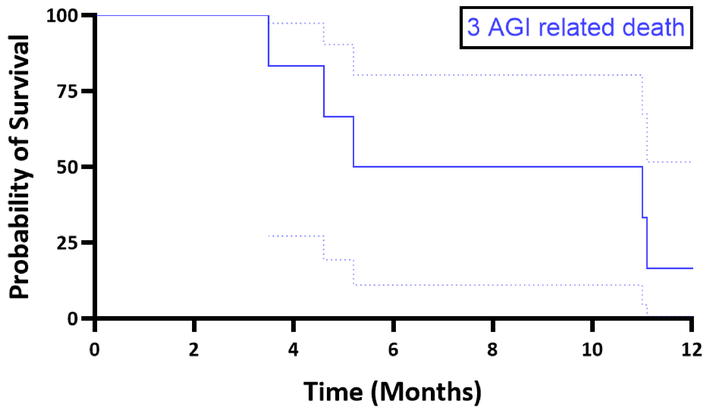
Variables are represented as mean ± SD (standard deviation) or *n* (%). ***TEVAR***, thoracic endovascular aortic repair. PS ***CMD,*** Patient-specific company-manufactured devices.

Table II. Procedure characteristics of patients with aortic graft infection.

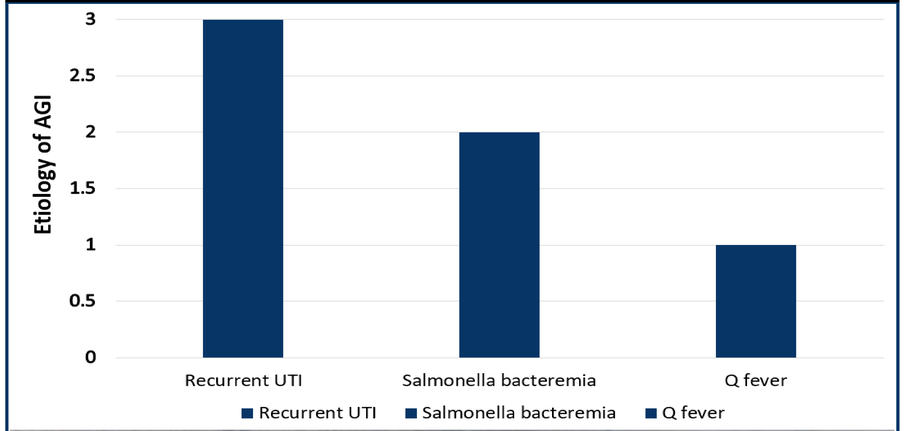
Variables	N= 6
ASA class III	6 (100)
Urgent repair	1 (16)
Operative time, min	372 ± 196
DAP (Gy cm2)	217 ± 304
RAK (mGy)	1862 ± 2254
Contrast load, ml	102 ± 23

Table III. Postoperative characteristics of patients with aortic graft infection.

Variables	N= 6
Time between FEVAR and AGI, months	11 ± 10
Conservative treatment with antibiotics	5 (83)
30-day mortality after AGI	2 (30)
Aortic rupture	2 (30)
Aneurysm sac enlargement	2 (30)
Presence of endoleak	4 (66)



Results



Conclusions

Aortic graft infection is a rare but devastating complication after complex endovascular aortic aneurysm repair. Endograft explantation is a challenging repair with a high risk of mortality after FBEVAR. Conservative management with lifetime antibiotics is the only treatment for unfit patients, but sac enlargement and rupture may limit its effectiveness.