

Endovascular Management of Mycotic Abdominal Aortic Aneurysm Secondary to Streptococcal Pneumoniae

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Introduction

- Mycotic abdominal aortic aneurysm (MAAA) is a rare but life-threatening condition with an incidence of about 0.65-2% of all aortic aneurysms.
- MAAA have poor prognosis as they have tendency to grow rapidly and rupture and the patients often have severe comorbidities and coexisting septic conditions.
- Conventional surgical treatment is open surgery but is associated with high morbidity and mortality and can be very demanding or even impossible.
- Endovascular aneurysm repair (EVAR) is a less invasive but controversial alternative to conventional open repair of MAAA.

Case Series

- Three cases of MAAA are described; all treated with endovascular stent graft with variable configurations (2 cases treated with EVAR and 1 with surgeon modified Fenestrated EVAR).
- The clinical diagnosis of MAAA, was made by clinical presentation, results of hematologic tests and culture, and CT findings.
- All cases grew streptococcus pneumoniae on blood culture.
- All patients underwent successful placement of stent grafts for their aneurysms.
- No 30-day postoperative mortality was observed

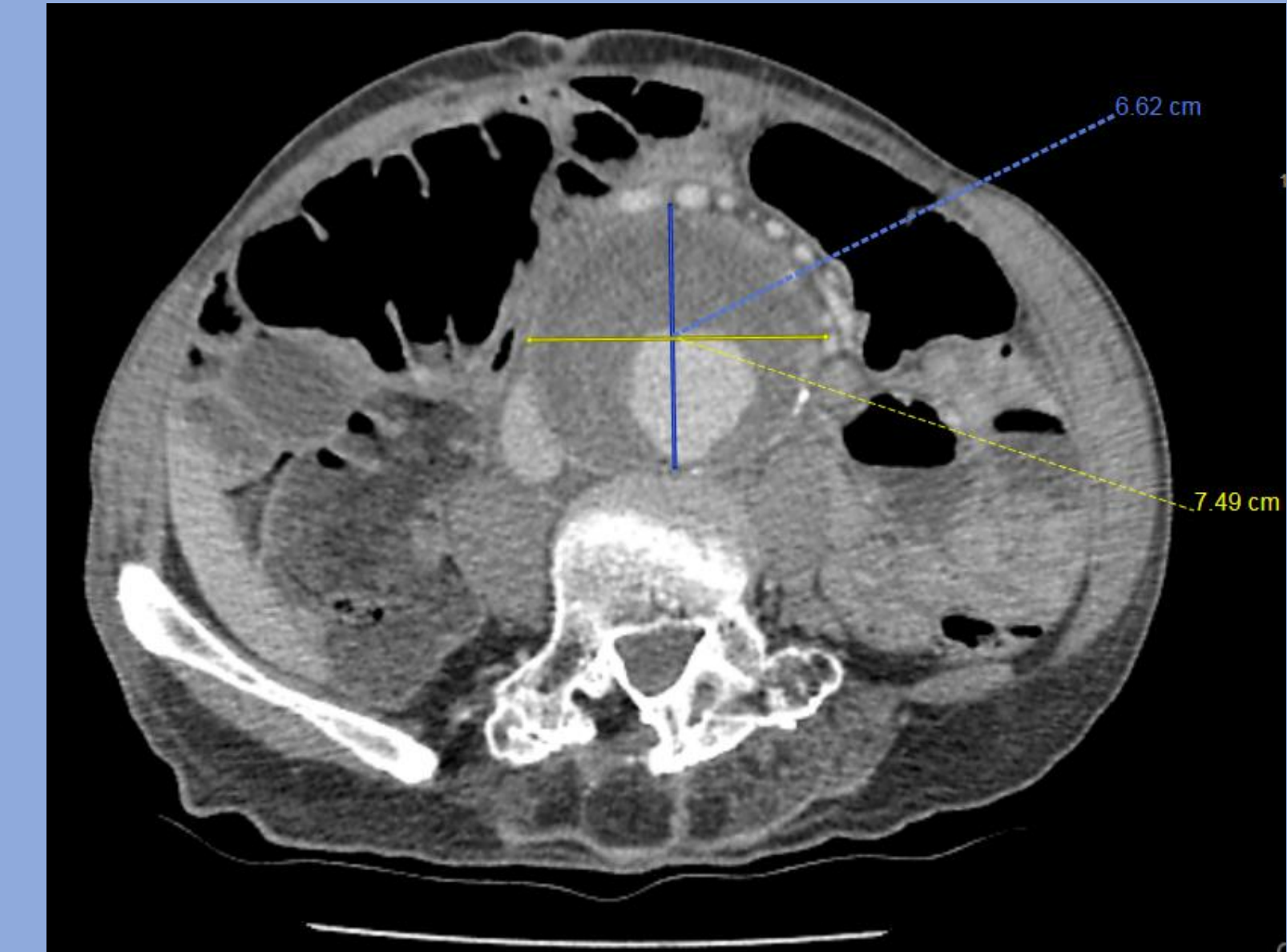
Case 1

- 76/M presented with worsening abdominal pain, generalised malaise, weight loss
- Back ground of iliac aneurysm diagnosed 3 months ago
- Large Left CIA (increased from previous CT)
- Raised CRP & WBC
- Admitted & IV antibiotics
- Blood culture positive with Streptococcal pneumoniae
- EVAR to treat mycotic aneurysm
- Post EVAR CT shows ? Graft infection.
- Discharged home with life long antibiotics



Case 2

- 69/M presented with generalised pain in abdomen, weight loss and feeling unwell.
- Raised WBC & CRP
- CT showed 75 x 65 mm infrarenal AAA with the aneurysmal sac showing several layers of different density
- Blood culture positive for Streptococcal pneumoniae
- Patient treated with IV antibiotics
- EVAR to treat MAAA
- Developed type 1a endoleak
- Protracted recovery with numerous antibiotics
- CT showed evidence of air bubbles near graft.
- Managed with antibiotics
- Discharged home on life long doxycycline

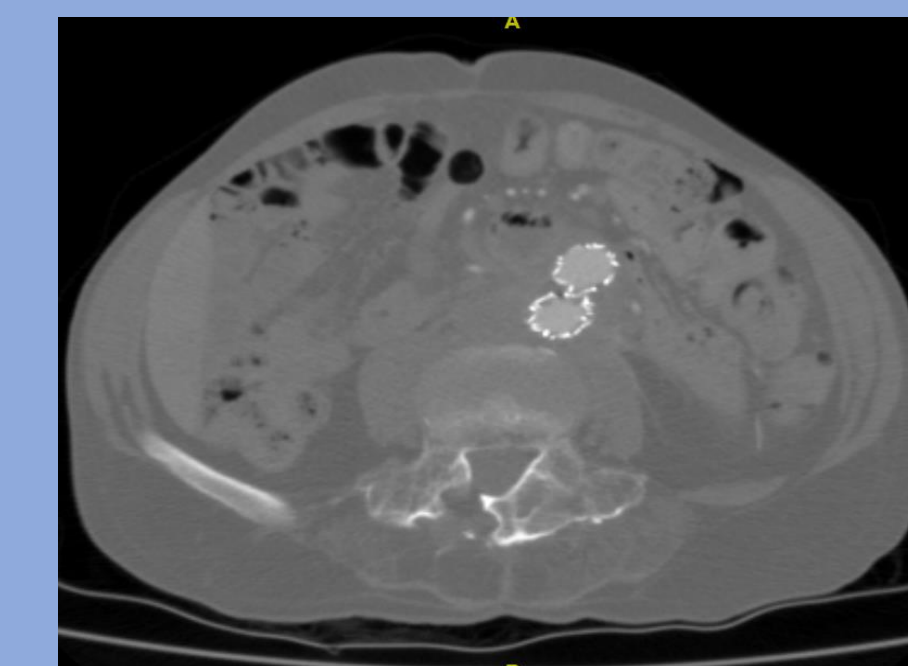


Comparison of CT Images

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Literature Search

Endovascular repair of mycotic aneurysms Karl Sorelius et al Uppsala, Sweden (J Vas Surg 2009;50:269-274)

- 13 MAA `s between 2000-2007 treated with EVAR
- 30 day survival 91%, 12 month survival 73%

Endovascular treatment of mycotic aortic aneurysm: a European multicentric study Sorelius et al (The European MAA collaborators) (Circulation 2014)

- 16 European centres with 130 MAA `s were retrospectively reviewed between 1999-2013
- 30 day survival 91%, 12 month survival 75%, 5 year survival 55%

Conclusion

Our short- term review shows that repair of MAAA can be accomplished with endovascular repair.

This may be a safer alternative to open repair particularly in patients who are not suitable for conventional open repair.