

Latissimus Dorsi Muscle Flap Coverage for Open Surgical Repair of an Infected TEVAR

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INTRODUCTION

- **Complications** after TEVAR include endoleaks, stroke, spinal cord ischemia, aortoesophageal fistulas.
- Although uncommon, **infection** of the thoracic stent graft may occur, and is associated with high morbidity and mortality.

Afifi RO, Sandhu HK, Leake SS, Boutrous ML, Kumar V 3rd, Azizzadeh A, et al.
Outcomes of Patients With Acute Type B (DeBakey III) Aortic Dissection: A 13-Year, Single-Center Experience.
Circulation. 2015 Aug 25;132(8):748-54.



OBJECTIVE

To report a patient with an ***infected TEVAR*** who underwent open repair with explanation of the infected stent graft, in situ reconstruction, and latissimus dorsi muscle flap (LDMF) coverage



METHODS

- A 70-year old male with a history of a **Stanford type A** aortic dissection with emergent open ascending repair in November 2013.
 - 2013: Total arch replacement with reconstruction of supra-aortic vessels.
 - 2015: TEVAR at outside institution.
- He was initially admitted to an outside hospital for **low-grade fever** and chest pain.

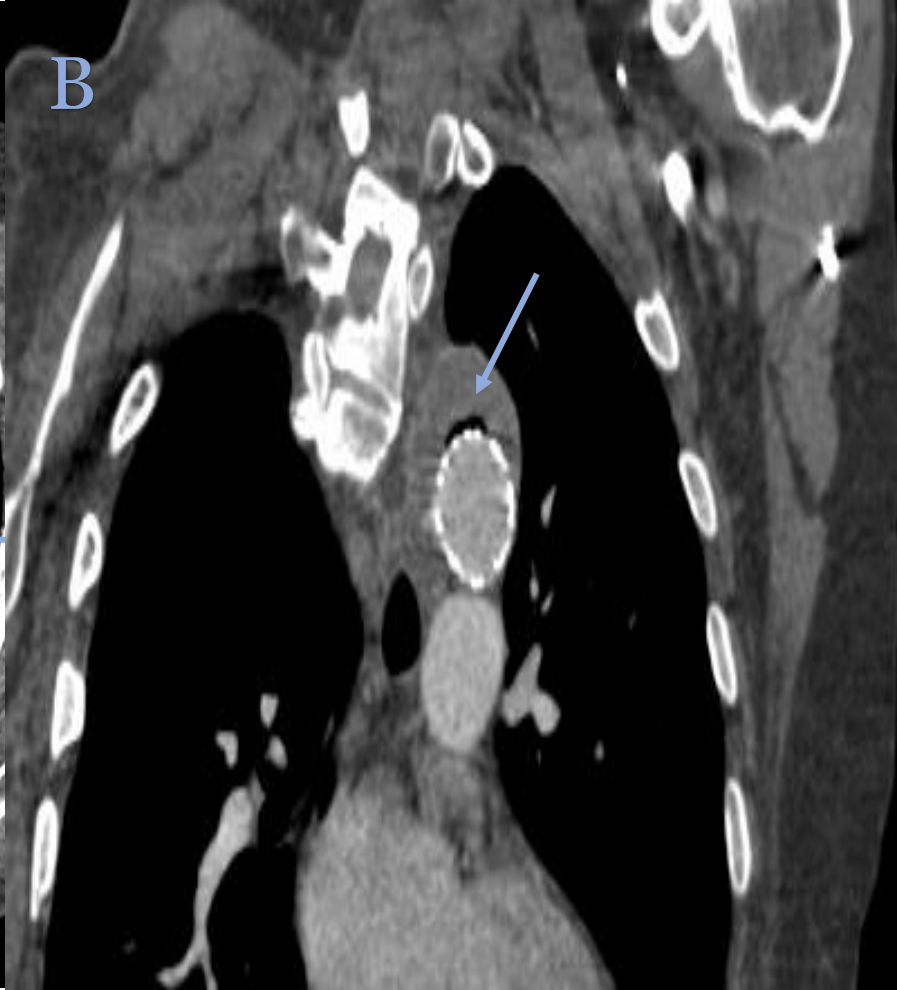


METHODS

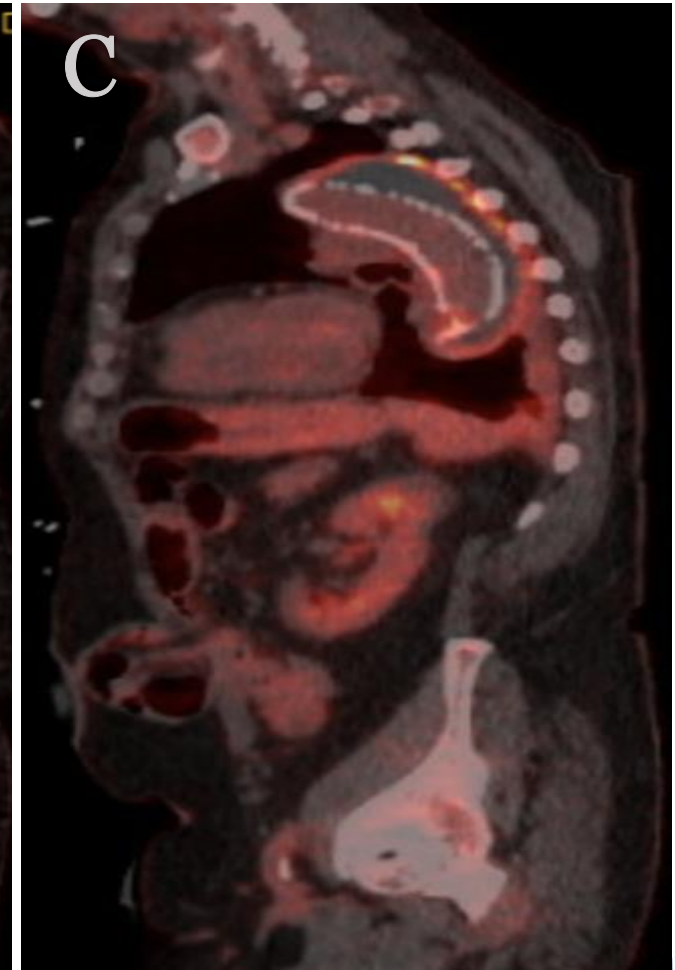
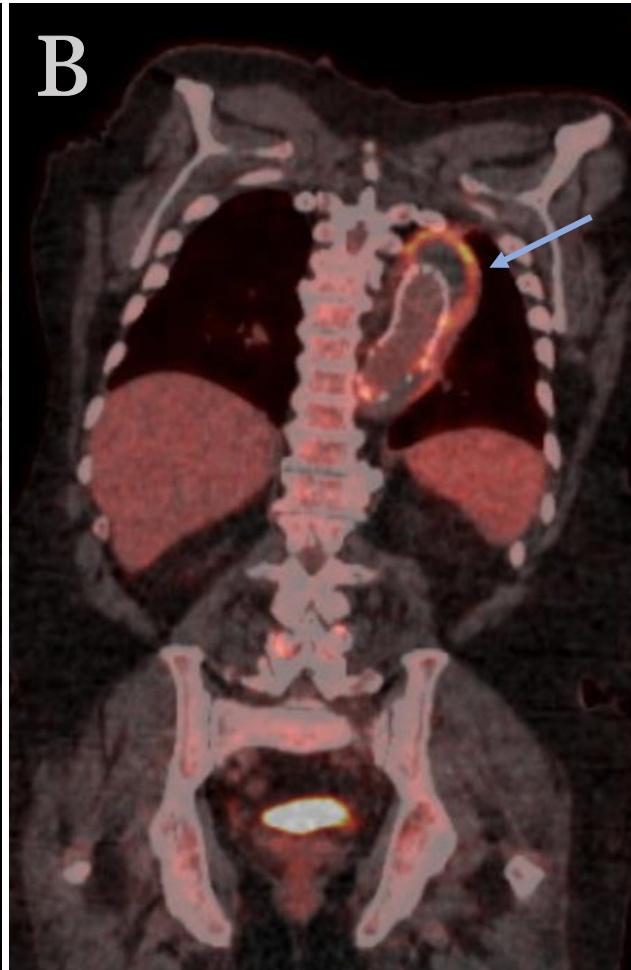
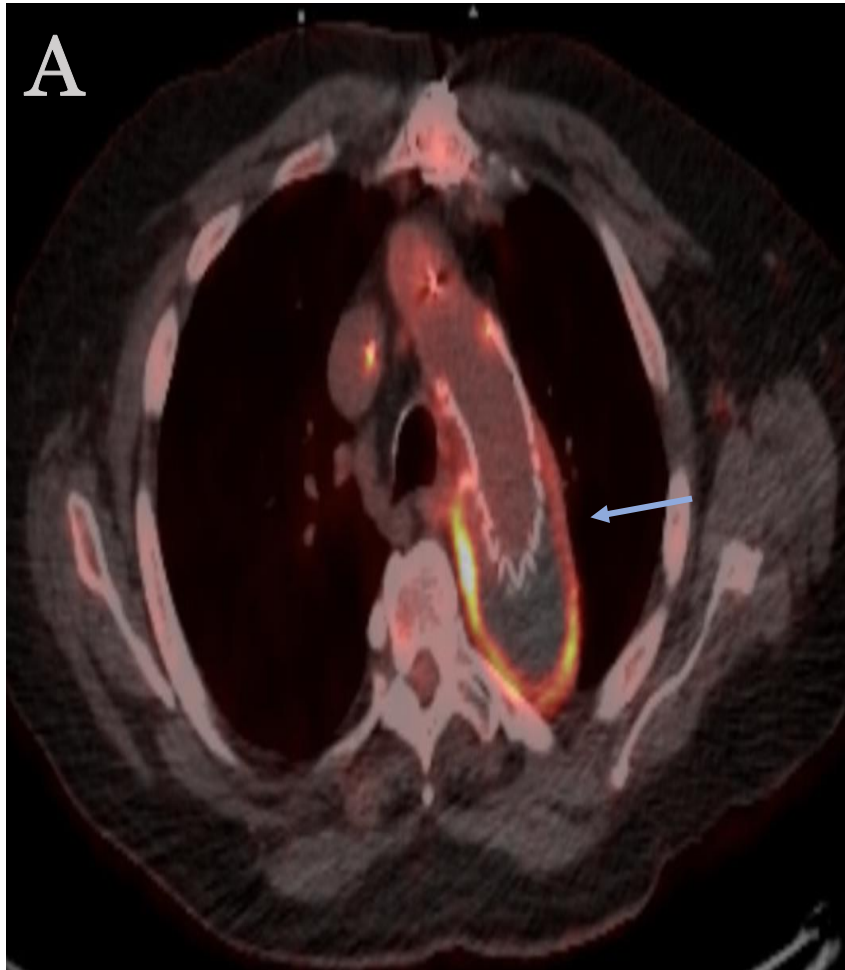
- ***On admission***, laboratory results showed a hemoglobin level of 12 g/dL, creatinine of 1.3 mg/dL, and white cell count of $9 \times 10^9/L$.
- ***Computed tomography*** angiography- CTA with intravenous contrast revealed gas surrounding the thoracic stent graft.



METHODS



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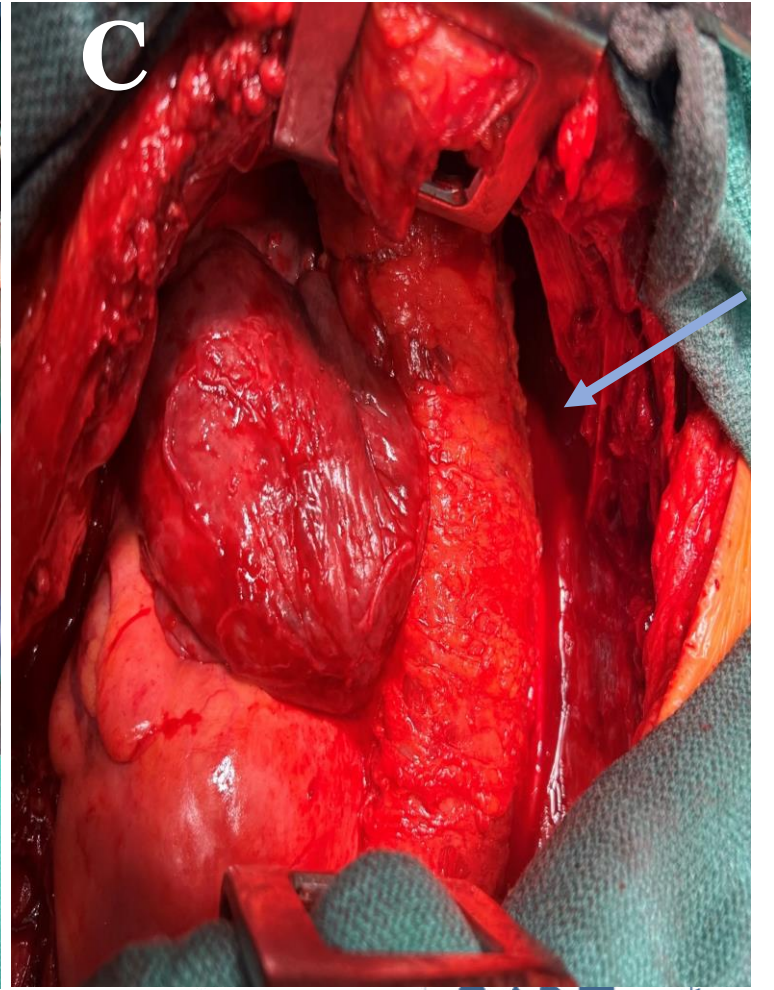
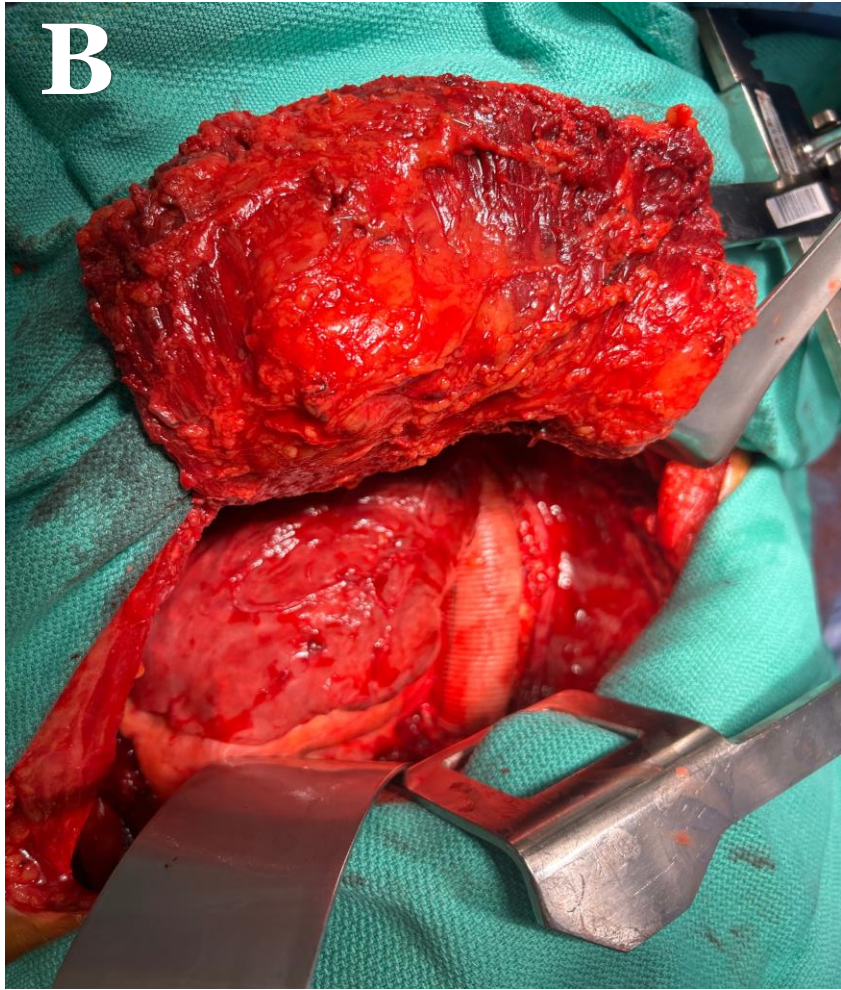
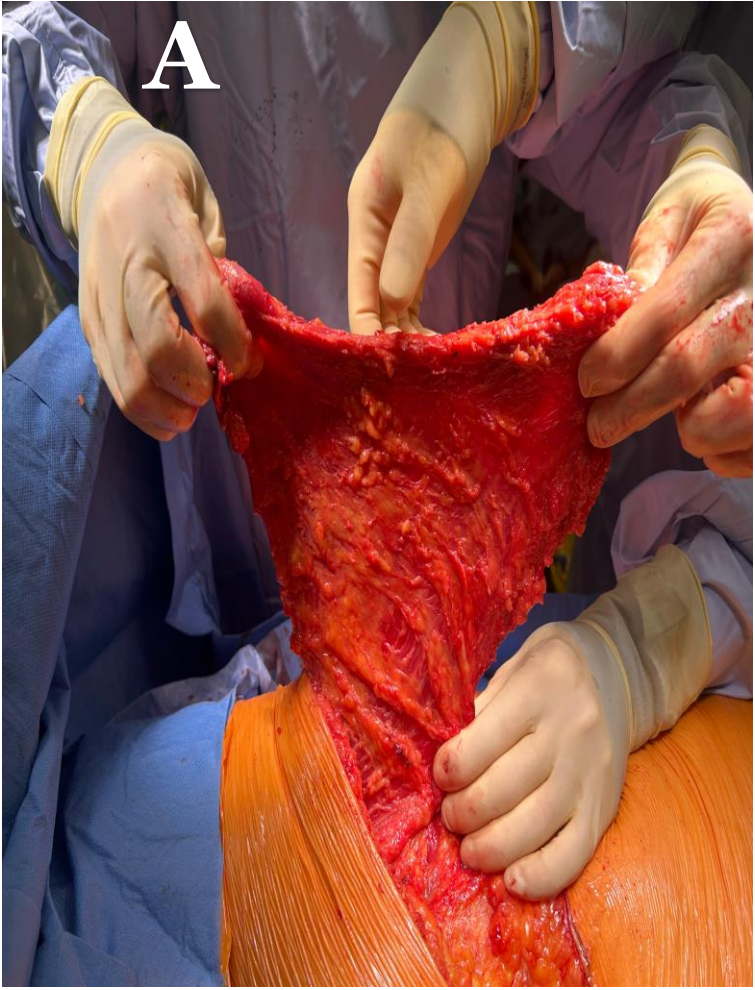


RESULTS

- The **TEVAR stent-graft was removed** and the aortic wall and periaortic tissue were debrided extensively.
- Repair was performed using a **Rifampin-soaked 28-mm Dacron** graft (Hemashield™).
- The LDMF was used to **wrap** the entire DTA graft and secured with interrupted 3-0 polypropylene sutures.



RESULTS



RESULTS

- **Aortic tissue** samples tested positive for Clostridium species. Antibiotics were administered iv for 6 weeks.
- **Lifelong** coverage with amoxicillin was scheduled thereafter.
- **CT scan** 12 months after surgery shows no aneurysmal dilatation or recurrence of infection.



DISCUSSION

- **Benefits** of the use of a LDMF.
- **Delivery of oxygen** & antibiotics to the periaortic infected area.
- **Prevent further infection** (vascularized supply to surrounding graft area).
- **No motor** functional loss is generally observed.

Taguchi S, Mori A, Suzuki R, Ishida O.
Technique for using pedicled latissimus dorsi muscle flaps to wrap prosthetic grafts in an infected thoracic aorta.
Ann Vasc Surg. 2013 Nov;27(8):1223-7.



CONCLUSIONS

Open surgery with latissimus dorsi muscle flap (LDMF) coverage is a feasible and safe technique in selected patients with infected TEVAR

