Emergent Thoracic Endovascular Aortic Repair (TEVAR) was performed postoperatively. Management focused on continuation of intravenous daptomycin, pain control, and controlling his underlying substance use disorder. He was able to be discharged from the hospital.

Following discharge, he required multiple readmissions for a graft infection and the development of an aorto-esophageal fistula.

Mycotic aortic aneurysm (MAA) is a rare phenomenon that is difficult to diagnose. Incidence of <3% among all types of aortic aneurysm. These infectious entities can spontaneously rupture, resulting in life-threatening hemorrhage.

### Introduction

- **Mycotic aortic aneurysm (MAA)** is a rare phenomenon that is difficult to diagnose.
- Incidence of <3% among all types of aortic aneurysm.
- These infectious entities can spontaneously rupture, resulting in life-threatening hemorrhage.

### Case Description

#### Initial Presentation

- A 45 year-old male with untreated hepatitis C and recent intravenous drug presented complaining of fever and back pain two days after slipping on milk and falling into a shelf.
- On exam, he was febrile up to 38 ºC, and had significant point tenderness along the mid-thoracic spine.
- Labs showed leukocytosis of 13 with neutrophilic predominance, elevated ESR and CRP. Urine drug screen was positive for cocaine. Blood Cultures were drawn.
- Magnetic Resonance Imaging (MRI) of thoracic spine initially read as negative for epidural abscess, discitis.
- Patient was admitted for endocarditis and he was started on broad spectrum antibiotics.

#### Progression

- After admission, MRI was addended indicating phlegmon extending from T6-T11 and soft tissue thickening around aorta from T7-T10 levels.
- A CT-guided aspiration of the phlegmon yielded Methicillin-Resistant Staph Aureus (MRSA) in culture, yet repeat blood cultures were negative.

#### While undergoing a transesophageal echocardiogram (TEE), it was noted that the patient had a contained rupture of the descending thoracic aorta into the phlegmon.

Subsequently, an emergent CT Angiography (CTA) confirmed the ruptured aortic aneurysm.

- **Emergent Thoracic Endovascular Aortic Repair (TEVAR)** was performed.

### Outcome

- Postoperatively, management focused on continuation of intravenous daptomycin, pain control, and controlling his underlying substance use disorder.
- He was able to be discharged from the hospital.
- Following discharge, he required multiple readmissions for a graft infection and the development of an aorto-esophageal fistula.

### Discussion

- **MAA** is a rare manifestation of a systemic infection which can result in vessel rupture and fatal hemorrhage.
- The most common organisms that cause MAA are *S. aureus* and non-typhoid Salmonella. Therefore, blood cultures should be ordered, as these are positive in 50-75% of patients.
- Interestingly, in our patient, blood cultures were negative despite being drawn prior to antibiotic initiation.
- With a sensitivity of 92-96% and a specificity of 93-100%, CTA is the modality of choice to diagnose a MAA.
- Definitive management of MAA is primarily surgical. Even if initial surgical treatment is successful, peri-operative mortality is as high as 63% in patients with an aneurysm rupture.

### Conclusion

- This case illustrates the need for rapid diagnosis and treatment of MAA.
- Fortunately, our patient’s ruptured MAA was diagnosed immediately on TEE, which led to immediate surgical intervention.
- Early consideration of MAA should be given to patients with similar clinical presentations.