METHODIST DEBAKEY CARDIOVASCULAR JOURNAL

Aortic Mycetoma with *Exserohilum*

MULTIMODALITY
MUSEUM IMAGE

HOUSTON Methodist DEBAKEY HEART & VASCULAR CENTER

JOYCE ZHUANG, BSA
OMNEYA KANDIL, MBMS
JUAN M. FARINA, MD
JAMILAH SHUBEILAT, MBBS, MD
GYANENDRA KUMAR, MD
KRISTEN SELL-DOTTIN, MD

*Author affiliations can be found in the back matter of this article

ABSTRACT

We present the first reported case of aortic mycetoma due to *Exserohilum*, a dematiaceous mold. The patient presented with neurologic symptoms 2 months after root-sparing ascending aortic aneurysm repair with aortic valve replacement. Multimodal imaging revealed irregular densities in the aortic lumen and graft, consistent with infectious thrombus. Redo aortic aneurysm repair and aortic valve replacement was performed, and a culture of the extracted thrombus confirmed the diagnosis.

CORRESPONDING AUTHOR:
Joyce Zhuang, BSA
Mayo Clinic, Phoenix, Arizona, US
zhuang.joyce@mayo.edu

KEYWORDS:
aorta; mycetoma; aneurysm; thrombus

TO CITE THIS ARTICLE:
Zhuang J, Kandil O, Farina JM, Shubeilat J, Kumar G, Sell-Dottin K. Aortic Mycetoma with *Exserohilum*. Methodist DeBakey Cardiovasc J. 2026;22(1):77-80. doi: 10.14797/mdcvj.1906

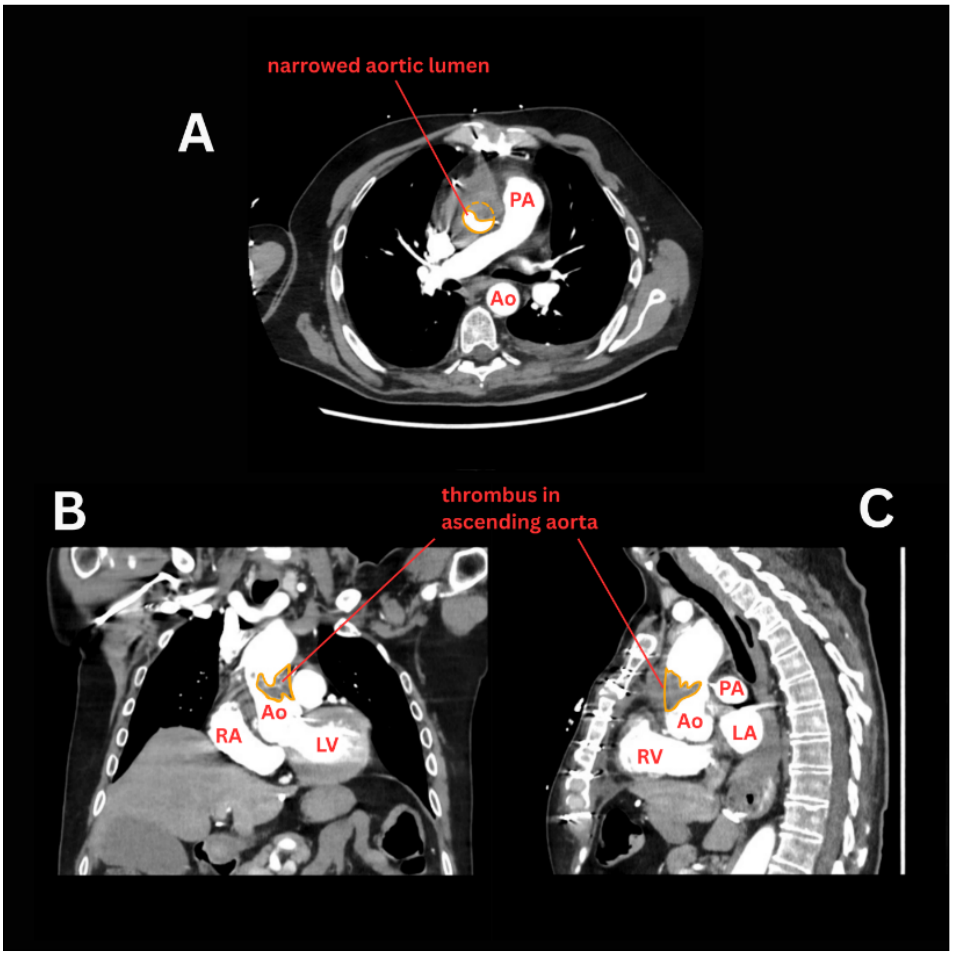
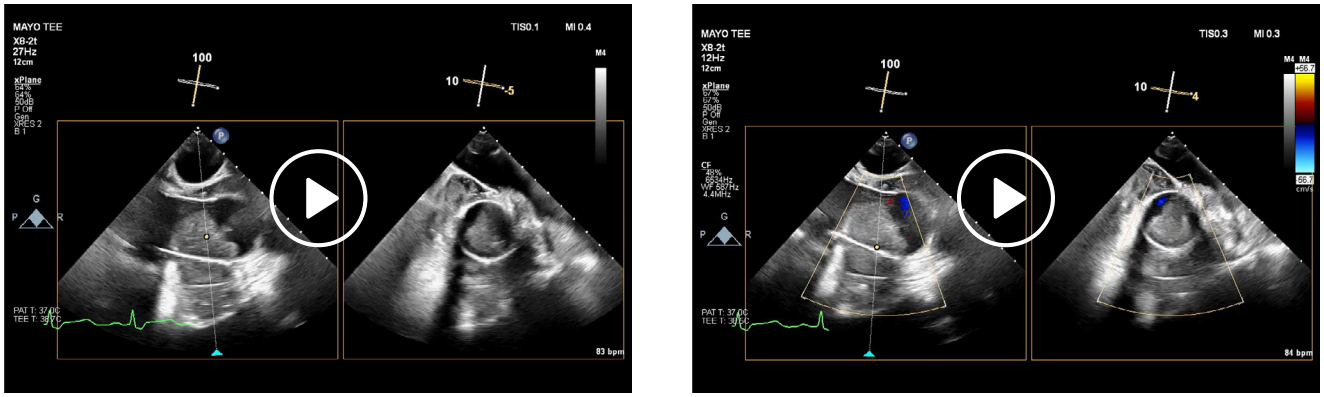


Figure 1 Computed tomography chest angiogram with contrast. Axial (A), coronal (B), and sagittal (C) views demonstrate surgical changes consistent with a prior root-sparing ascending aorta aneurysm repair and aortic valve replacement. Imaging reveals extensive, near-circumferential soft tissue surrounding the ascending aorta with a lobulated intraluminal component. This results in significant ascending aortic luminal narrowing, measuring down to 24 × 15 mm. PA: pulmonary artery; Ao: aorta; RA: right atrium; LV: left ventricle; RV: right ventricle; LA: left atrium

A 63-year-old male with a past medical history significant for hypertension, asthma, pulmonary coccidiomycosis, and root-sparing ascending aortic aneurysm repair and aortic valve replacement 2 months prior presented to the Emergency Department with altered mental status. Computed tomography (CT) and magnetic resonance imaging of the brain revealed multiple acute and subacute infarcts in various regions. CT angiogram of the chest showed extensive near-circumferential soft tissue surrounding the ascending aorta with lobulated intraluminal components resulting in an ascending aortic luminal narrowing down to 24 × 15 mm (Figure 1). Transesophageal echocardiogram showed large irregular echogenic densities occupying most of the aortic lumen (Video 1).

Because the imaging suggested a localized infection, vegetation, or thrombus, the patient underwent a redo aortic aneurysm repair along with an aortic valve replacement. Aortic obstructions were visualized intraoperatively as highly organized, rubbery, tan-colored vegetations (Figure 2). Aortic tissue cultures showed filamentous fungus but later grew dematiaceous mold identified as *Exserohilum* (Figure 3).

Fungal infection of the aorta is extremely rare, occurring primarily in immunocompromised patients, with few reported incidents of fungal aortitis after aortic valve replacement.[1] *Candida* and *Aspergillus* are the most frequently reported fungal pathogens affecting the aorta, though the prevalence is unclear.[2] *Exserohilum* is a soil-borne fungus best known for a 2012 outbreak associated with epidural and intra-articular injections, resulting in 741 confirmed infections and 55 deaths.[3] To date, there is no documented incident of *Exserohilum* infection with cardiac or aortic involvement. Fungal endocarditis presents with nonspecific constitutional symptoms, with high rates of mortality (up to 50%) resulting from large emboli to major vessels.[4] As a result, multimodality imaging is of paramount importance for early diagnosis and treatment.



Video 1 Transesophageal echocardiography **(A)** evaluation of the ascending aortic graft mass. Midesophageal ascending aorta short-axis and long-axis views reveal a large, irregular (2.3 × 3 cm) echogenic density occupying most of the lumen of the ascending aortic graft. The mass extends distally but spares the aortic arch. Color Doppler **(B)** demonstrates mildly turbulent flow passing through the narrowest remaining segment of the aortic lumen. See also at https://vimeo.com/1234134584 and https://vimeo.com/1234136503.

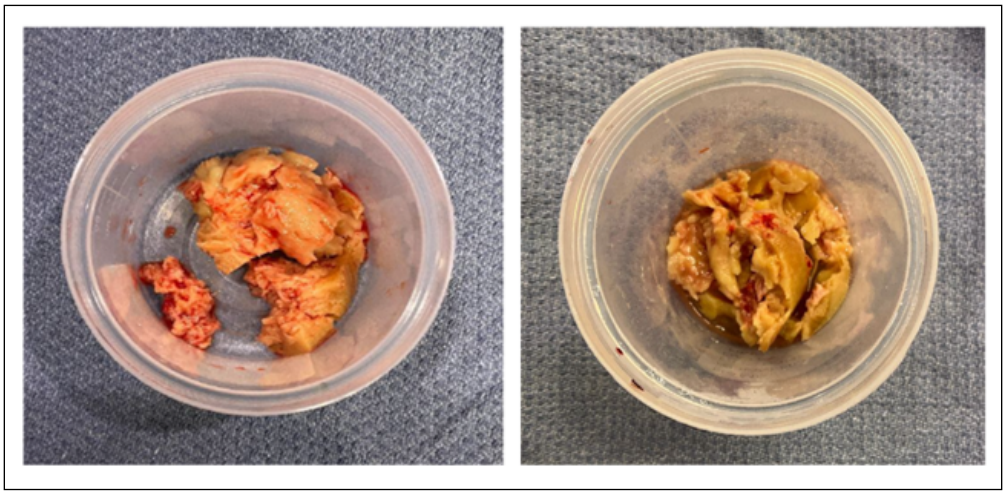


Figure 2 Vegetative material extracted from aortic graft. Surgeon notes reported organized, tan, friable vegetations with mobile components present in the ascending aortic graft and on the cor knot sutures holding the aortic valve in place.

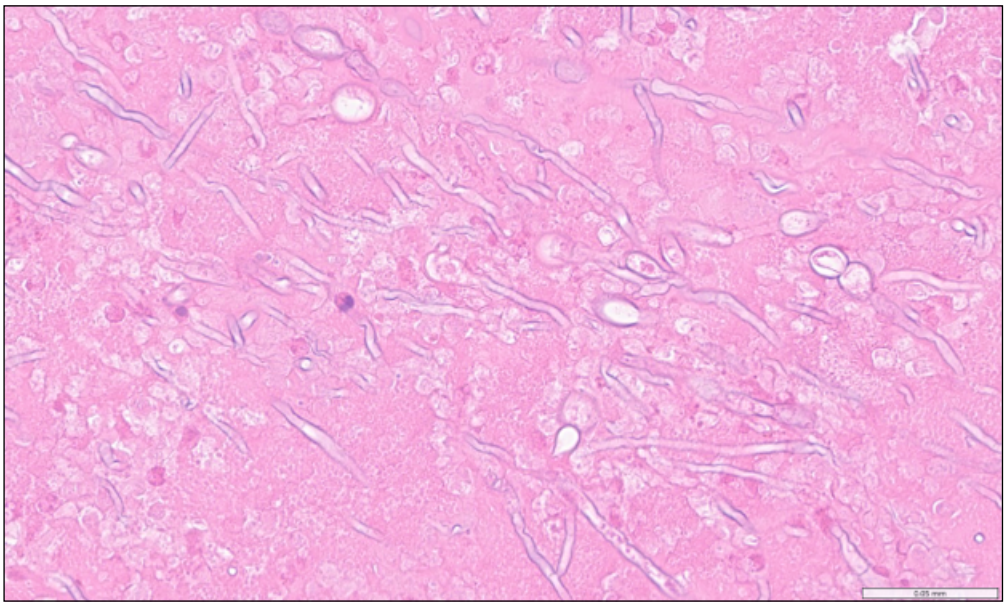


Figure 3 Pathologic sample of thrombus shows fungal endocarditis with matted fungus with yeast and hyphal forms, initially most consistent with *Coccidioides* but later growing *Exserohilum rostratum* on culture.

COMPETING INTERESTS

The authors have no competing interests to declare.

AUTHOR AFFILIATIONS

Joyce Zhuang, BSA orcid.org/0009-0000-5341-8580
Mayo Clinic, Phoenix, Arizona, US
Omneya Kandil, MBMS orcid.org/0000-0002-5874-6812
Mayo Clinic, Phoenix, Arizona, US
Juan M. Farina, MD orcid.org/0000-0002-5824-8485
Mayo Clinic, Phoenix, Arizona, US
Jamilah Shubeilat, MBBS, MD orcid.org/0000-0002-5393-0397
Mayo Clinic, Phoenix, Arizona, US
Gyanendra Kumar, MD orcid.org/0000-0001-6300-3821
Mayo Clinic, Phoenix, Arizona, US
Kristen Sell-Dottin, MD orcid.org/0000-0001-5933-3537
Mayo Clinic, Phoenix, Arizona, US

REFERENCES

1. **Bonou M, Anagnostopoulos C, Vakrou S, Kapelio C, Barbetseas J, Psichogiou M.** Fungal aortitis after aortic valve replacement. Int J Infect Dis. 2020 Oct;99:489-490. doi: 10.1016/j.ijid.2020.08.036
2. **Writing Committee Members; Isselbacher EM, Preventza O, Hamilton J,** et al. 2022 ACC/AHA Guideline for the Diagnosis and Management of Aortic Disease. A Report of the American Heart Association/American College of Cardiology Joint Committee on Clinical Practice Guidelines. J Am Coll Cardiol. 2022 Dec 13;80(24):e223-e393. doi: 10.1016/j.jacc.2022.08.004
3. **Pugh D, Grayson P, Basu N, Dhaun N.** Aortitis: recent advances, current concepts and future possibilities. Heart. 2021 Oct;107(20):1620-1629. doi: 10.1136/heartjnl-2020-318085
4. **Thompson GR 3rd, Jenks JD, Baddley JW,** et al. Fungal Endocarditis: Pathophysiology, Epidemiology, Clinical Presentation, Diagnosis, and Management. Clin Microbiol Rev. 2023 Sep 21;36(3):e0001923. doi: 10.1128/cmr.00019-23

TO CITE THIS ARTICLE:
Zhuang J, Kandil O, Farina JM, Shubeilat J, Kumar G, Sell-Dottin K. Aortic Mycetoma with *Exserohilum*. Methodist DeBakey Cardiovasc J. 2026;22(1):77-80. doi: 10.14797/mdcvj.1906

Submitted: 26 June 2026 **Accepted:** 09 September 2026 **Published:** 04 November 2026

COPYRIGHT:
© 2026 The Author(s). This is an open-access article distributed under the terms of the Attribution-NonCommercial 4.0 International (CC BY-NC 4.0), which permits unrestricted use, distribution, and reproduction in any noncommercial medium, provided the original author and source are credited. See https://creativecommons.org/licenses/by-nc/4.0/.

Methodist DeBakey Cardiovascular Journal is a peer-reviewed open access journal published by Houston Methodist DeBakey Heart & Vascular Center.