

Aorto-cutaneous fistula due to Stanford A aortic dissection recurrence: images in cardiology

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Case description

A 59-year-old man was admitted to the emergency department with a 10-day history of chest discomfort and a pulsatile bulge at the right hemithorax. He had hypertension, aortic insufficiency, and aortic dissection for which he was treated using Castro Bernardes intraluminal ring with a Dacron patch 13 years prior. Laboratory analysis and electrocardiogram revealed no abnormalities. A chest CT (*Figure 1*) detected a voluminous aneurysm in zone 0 (classification proposed by Ishimaru¹) with contrast endoleak for the aneurysmatic sac interior, and a recurrence of Stanford A aortic dissection. Dilation of the aorta begins in the brachiocephalic trunk and extends from the descending aorta to the infrarenal abdominal branch. The aortic aneurysm sac was also communicating with the right anterior chest wall, creating an aorto-cutaneous fistula, which is a rare life-threatening condition after aortic surgery^{2,3} that requires a prompt diagnosis and immediate approach.² The cardiothoracic surgeons intended to perform a modified Bentall de Bono procedure; however, surgical procedures were delayed due to the COVID-19 pandemic, and the patient was hospitalized in the ICU with adequate blood pressure and pain control using meto-

prolol, sodium nitroprusside, and dipyron. The patient presented symptoms of COVID-19 in the next few days, was then in critical condition with septic shock and acute kidney failure, suffered a cardio-respiratory arrest, and died 14 days after his admission.

Lead author biography



Maryana Mendonca is a 24-year-old Medical Doctor. She has always been passionate about the human heart and vessels, and that is the reason why she got involved with cardiovascular research and topics. Her goal is to pursue a career in Cardiology and help patients through cardiovascular diseases prevention and health promotion.

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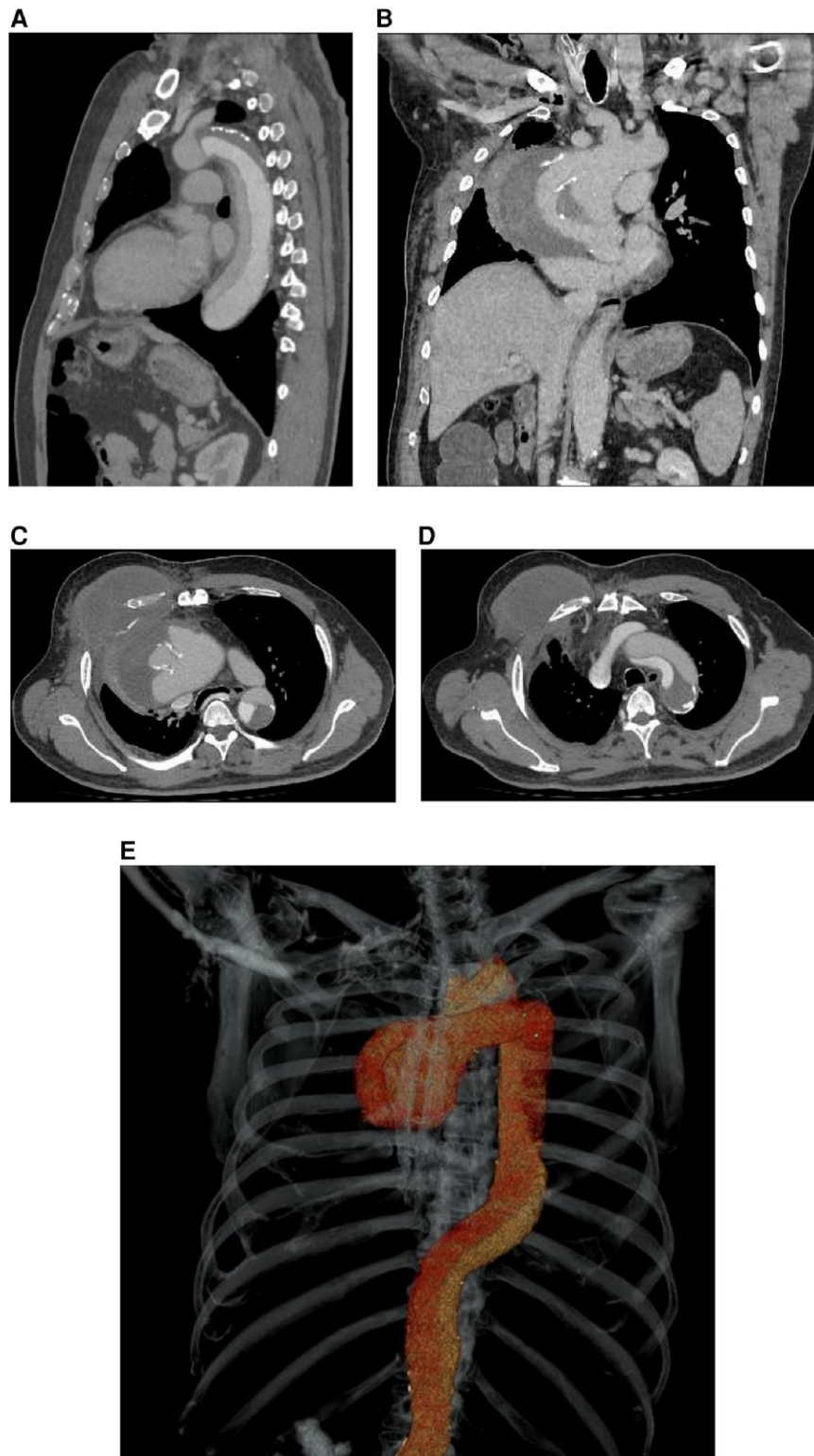


Figure 1 (A) Sagittal computed tomography chest demonstrating aortic aneurysm in the descending aorta. (B) Coronal computed tomography chest demonstrating ascending aorta trajectory, aneurysm starting in the sinotubular junction and extending to the aortic arch, with an intraluminal aortic ring (used in Castro Bernardes procedure); voluminous aneurysm with thrombus and contrast endoleak. (C) Axial computed tomography chest showing Stanford A aortic dissection beginning in the brachiocephalic trunk; costal arches destruction due to pressure mechanisms of aortic dissection. (D) Axial computed tomography chest: aortic aneurysm sac communicating with the right anterior chest wall, creating an aorto-cutaneous fistula. (E) 3D reconstruction.

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Consent: The authors confirm that written consent for submission and publication of this image in cardiology including images and associated text has been obtained from the family's patient in line with COPE guidance.

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Data availability

The data that support the findings of this study are available from the corresponding author, MHSM, upon reasonable request.

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