

Clinical Image

Saccular Aneurysm of the Aortic Arch Discovered Incidentally During Coronary Angiography

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Clinical Image

A 75-year-old male patient, with medical history of borderline coronary artery disease, diabetes mellitus and dyslipidemia, was admitted to the cardiology department of our hospital with deteriorating dyspnea on exercise and hoarseness during the last three months. His vital signs were normal, and the physical examination, EKG and laboratory tests had no significant findings. The chest X-Ray showed a widening of the mediastinum. A new coronary angiography was scheduled to exclude the deterioration of the coronary artery disease. In the catheter laboratory, a left radial access was used and because it was impossible to pass the guide wire from the aortic arch, an infusion of contrast agent through a pig-tail catheter revealed a large saccular aneurysm of the aortic arch. A CT scan of the thorax with iv contrast confirmed the presence of a saccular aneurysm of the aortic arch with maximum diameter of 54 mm, which pressed the tracheal tube, explaining the patient's symptoms (Figure 1). The coronary angiography was completed the next day without significant findings. An ultrasound of heart was also done, which showed the aneurysm at the suprasternal view, and revealed normal heart function. Our patient was referred to a Thoracic surgeon for further evaluation. A hybrid procedure was selected, and the aneurysm was covered successfully with an endovascular stent graft. The patient had an uneventful post-operative course and a new thorax CT was performed at his follow-up three months later ([Supplementary Video](#)).

Aortic arch is the less common site of thoracic aortic aneurysms. These aneurysms are mainly asymptomatic, being discovered incidentally with thoracic screening imaging techniques. The heart ultrasound with suprasternal views is an easy way to detect aortic arch

aneurysms and should be done for technical reasons before every coronary angiography.

Keywords: Aortic arch aneurysm; Saccular aneurysm; Coronary angiography; Computed tomography; Hybrid thoracic procedure

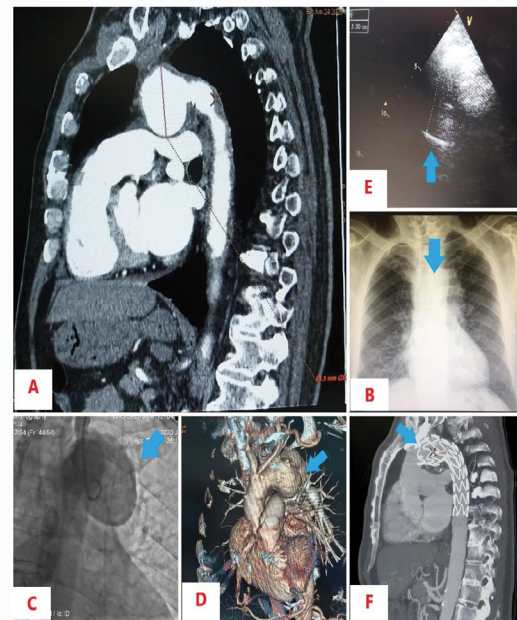


Figure 1: A) Computed tomography, sagittal view depicting the saccular aortic arch aneurysm with diameter of 54 mm pressing the trachea, B) Chest X-Ray showing the widening of the mediastinum (blue arrow), C) Infusion of contrast agent during the coronary angiography through a pigtail catheter showing the aneurysm (blue arrow), D) 3D reconstruction of the CT images, depicting the aortic arch aneurysm (blue arrow), E) Suprasternal view of heart ultrasound, depicting the aortic arch aneurysm (blue arrow), and F) Follow-up computed tomography, sagittal view, depicting the aneurysm covered by an endovascular stent graft.

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