

An Unusual Anatomy - Thoracic Aorta Aneurism

João Olivério Ribeiro¹, João Pinto Machado¹, Eurico Oliveira²

¹MD, Medical Intern, Internal Medicine Service, São Teotónio Hospital, Viseu, Portugal

²MD, Medical Assistant, Internal Medicine Service, São Teotónio Hospital, Viseu, Portugal

Abstract: *The authors present a case of a patient that recurred to the emergency department complaining of dyspnea and fever. There was no history of traumatism. The diagnosis of Pneumonia was made, and he began antibiotic therapy. Since the image of the R-ray was suspicious, the patient was proposed to the internment, proposal that was refused. A re-evaluation appointment was then scheduled. The patient achieved a progressive improvement of his complaints with the prescribed antibiotherapy, and at the re-evaluation consult had a complete resolution of the complaints. The second X-Ray was then obtained, with resolution of the pneumonia, but maintaining the suspicious left mid-thoracic image. A subsequent CT-scan confirmed the patient had a thoracic aorta aneurism.*

Keywords: Thoracic Aorta Aneurism; Pneumonia

1. Clinical Image

The image A is a chest X-ray obtained from a 72 years old male patient, without any known medical history, taking no medications, and self-reportedly as healthy. The patient recurred to the emergency department complaining of dyspnea and fever. There was no history of traumatism. Complementary blood exams revealed elevation of the inflammatory markers, with Leukocytosis and Neutrophilia as well as C Reactive Protein elevation. The diagnosis of Pneumonia was made, and he began antibiotic therapy. Since the image above the pneumonia was suspicious, the patient was proposed to the internment, proposal that was refused. A re-evaluation appointment was then scheduled. The patient achieved a progressive improvement of his complaints with the prescribed antibiotherapy, and at the re-evaluation consult had a complete resolution of the complaints. The second X-Ray (image B) was then obtained, with resolution of the pneumonia, but maintaining the suspicious left mid-thoracic image.

A subsequent CT-scan confirmed the patient had a thoracic aorta aneurism.

The thoracic aorta aneurism corresponds to a dilation of all layers of the arterial wall, causing an increase in at least 50% of the diameter. [1]

It usually is an asymptomatic pathology, identifiable either accidentally in imageology exams by an enlarged aortic shadow or mediastinum, such as in the present case (in a chest X-Ray due to a respiratory infection) or due to a complication, such as rupture or dissection. [1;2] When symptomatic, the symptoms may be chest pain, hoarseness, cough and dysphagia. [1]

The adequate targets to manage these patients are a blood pressure under 140/90 mmHg or 130/80 mmHg if comorbidities are present, with a target heart rate under 70bpm. Beta-blockers eventually combined with angiotensin-converting enzyme inhibitors or angiotensin II receptor blockers are the drugs of choice. Surgical treatment may be recommended with aortic diameters larger than 4.5cm. [1]

First degree relatives of patients with thoracic aorta aneurism should be screened with a transthoracic echocardiogram. [2]

The image A shows both the voluminous thoracic aorta dilation and a lower left lobe pneumonia, which led to the recognition of the aneurism. The right image, after antibiotic treatment, shows the maintenance of the aortic dilation, corresponding to the aneurism.

2. Contribution Statement

All authors were involved in data collection. All authors edited and approved the final version of the manuscript.

Conflict of interest: None declared

References

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Figure legends



A – Thoracic radiography with an infiltrate on the left lower lobe and apparent mediastinum enlargement to the left



B- Thoracic radiography with resolution of the infiltrate and maintenance of the apparent mediastinum enlargement to the left