

Case Report

An uncommon presentation of a common disease: a case of tertiary syphilis

Manjari Bhat*, Ashique Hamza, Subin S., K. G. Sajeeth Kumar

Department of Medicine, Government Medical College, Kozhikode, Kerala, India

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*Correspondence:

Dr. Manjari Bhat,

E-mail: manjari511996@gmail.com

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ABSTRACT

Thoracic aortic aneurysm is one of the late and uncommon presentations of syphilis. If the aneurysm is large it causes symptoms suggesting mass effect. Syphilis being a common disease worldwide has recently re-emerged. Early syphilis if left untreated can lead to a significant morbidity. We reported a case of 44 years old man who was incidentally detected to have syphilitic thoracic aortic aneurysm with features of SVC compression.

Keywords: Syphilis, Aortic aneurysm, Pneumonia, SVC compression

INTRODUCTION

Syphilitic aortic aneurysm (SAA) is caused by tertiary stage of syphilis infection. With the use of penicillin, complications are not seen often and usually go unnoticed.¹ At the beginning, inflammation starts from outermost layer of the blood vessel, including the vasa vasorum that supply the aorta itself with blood.

As the situation worsens, the vasa vasorum undergo hyperplastic thickening of their walls thereby restricting blood flow and causing ischemia of the outer two-thirds of the aortic wall. If it continues progressing, syphilitic aortitis leads to an aortic aneurysm.²

CASE REPORT

44 years old male, with a significant history of smoking presented with fever, cough with yellowish expectoration and breathlessness (MMRC grade 3) for one-week duration. General examination revealed distended neck veins, was febrile (100 F); had features suggestive of right sided pneumonia on respiratory system examination. Distended veins were present over abdomen with flow direction above downwards suggesting SVC compression. Chest X-ray revealed anterior mediastinal widening, with

right sided diaphragmatic paralysis with non-homogenous opacity on the same side. He was treated with antibiotics outside and was referred in view of chest X-ray changes (Figure 1).

With the possible diagnosis of aortic aneurysm and SVC obstruction, workup for the same was done. On further enquiry and detailed history taking patient revealed history of high-risk behaviour in the past. VDRL done was positive (1:16), which was further confirmed by TPHA (1:2560). CSF VDRL, screening of family members were found negative. Screening for other sexually transmitted diseases were negative, ANA, ANCA was negative.

ECHO was suggestive of mild PAH. CT aortogram (Figure 2) revealed a large (10.6×9.3×11.1 cm) partially thrombosed saccular aneurysm arising from antero lateral wall of ascending aorta causing mass effect on superior vena cava, right pulmonary artery, right bronchus, right coronary artery and right atrial appendage with elevated right hemidiaphragm.

He was treated with benzathine penicillin 2.4 million units IM once weekly for 3 weeks. CTVS later on did corrective surgery for aortic aneurysm. Patient now is on regular follow-up devoid of symptoms.



Figure 1: Mediastinal widening with elevated right hemi diaphragm.



Figure 2: CT aortogram showing thoracic aortic aneurysm.

DISCUSSION

Large number of individuals, especially in developing and under developed countries, do not seek medical attention for painless chancre of primary infection or the non-specific rash of secondary syphilis, thus leading to complications due to tertiary syphilis including aortic aneurysm or neurosyphilitic manifestations.

Cardiovascular syphilis generally manifests about 15-30 years after the initial infection.³ In particular, aortic aneurysm is the most common complication of syphilitic aortitis, and the ascending aorta is the segment most commonly affected (50%), followed by the arch (35%) and the descending aorta (15%).⁴ In Roberts et al study, they emphasized that syphilis remains a major cause of ascending aortic aneurysm.⁵

Aortitis typically involves tubular portion of ascending aorta/aortic arch and descending thoracic aorta sparing the sinus of valsalva.⁶ Aortic valve insufficiency due to the same is not usually seen. Though the disease is quite common, high index of suspicion with proper history taking is essential to diagnose and treat the same. Large syphilitic aneurysm may cause symptoms via mass effect on neighbouring mediastinal structures including SVC, pulmonary artery, esophagus, thoracic spine and bodies, etc. Which makes it important to enquire about compression symptoms as well. As with any aneurysm patients with syphilitic aortitis are at increased risk for dissection and rupture.

The clinical manifestations of patients with syphilis aortic aneurysm could vary. Most intact aortic aneurysms do not produce symptoms. As they enlarge, symptoms such as chest pain and back pain may develop. In patients presenting with aneurysm of the arch of the aorta, a common sign is a hoarse voice from stretching of the left recurrent laryngeal nerve. Rarely, clotted blood which lines most aortic aneurysms can break off and result in an embolus.

Aneurysms can be found on physical examination. Aortic imaging is necessary to confirm the diagnosis and to determine the anatomic extent of the aneurysm. The principal causes of death due to thoracic aneurysmal disease are dissection and rupture. Once rupture occurs, the mortality rate is 50-80%, and most deaths in patients with the Marfan syndrome are the result of aortic disease.⁷

Increased risk of co-existing HIV needs to be ruled out in all these patients and vice versa.⁸

CONCLUSION

This case demonstrates the potential of large thoracic aneurysm to cause mass effects. Ascertaining the aetiology of aneurysmal disease is important. Syphilis being a common disease worldwide has recently re-emerged. Primary prevention together with provision of easily accessible diagnostic and treatment services can help in curing and reducing the transmissibility and shall remain cornerstone of syphilis control.

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