TUBERCULOUS ANEURYSM OF DESCENDING AORTA: REPORT A NEW CASE WITH CT ANGIOGRAPHIC APPEARANCE

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ABSTRACT

Tuberculous aortic aneurysm is a rare entity. We made a report of a 76-year-female who was admitted to our hospital with history of one year dysphagia. The patient had no evidence of hypertension, diabetes mellitus or accident and dysphagia gradually progressed during the year being admitted. Leaking descending thoracic aortic aneurysm was shown in patient's thoracic CT scan. After a well through checking and studying of patient past medical history we found that she was hospitalized several years ago for a period of six months, as a result of cough, shortness of breath and has been taking anti TB drugs. The aneurysm was due to TB which manifested as dysphagia. CT angiography with maximum intensity projection (MIP), multiplanar reformation (MPR) and volume rendering (VR) clearly depict the size and extension of aneurysm with its complication and adjacent organ pathology.
Keywords: Tuberculosis, Aneurysm, CT angiogrpahy.

Introduction

Tuberculous aortic aneurysm is a very rare disease.[1] The first report of TB aneurysm was written by Weigert in 1882.[2] In a review of literature by Choudhary et al[3] they found 88 case reports of aortic pseudoaneurysm in the past century. Silbergleit et al[4] in a review of articles found only 51 cases of TB aortic aneurysm. Aortic involvement is more common to be pseudo aneurysm than true aneurysm.[5] Aortic aneurysm are most likely founded in old patient and it is prone to perforation so aortic aneurysm has a high mortality rate.[6] We reported a new case of aortic aneurysm using CT angiography as a modality of choice for detection and estimation of its complication.

Case Report

This was the case of a 76-year-old female admitting to our hospital for one year dysphagia especially to solid food but comfortable for liquids. She had no sign of hoarseness and had only been taking anti dyspeptic drugs for several months. Patient had no evidence of underlying disease such as diabetes mellitus or hypertension or evidence of trauma like car accident. On physical examination there was reduction of breath sounds on left lower hemithorax without any other abnormality. Blood urea nitrogen (BUN) and creatinin (Cr) was mildly elevated. Heart sounds was normal and no other abnormality like organomegaly or lymphadenopathies was detected.

In chest x-ray (CXR) there was a mediastinal mass in left side therefore she sent to barium study. In barium swallow a mass pushing barium column to anterior and right side was seen (Fig. 1A). No mucosal irregularity was evident in barium study which was confirmed by endoscopy suggesting of extramural mass.

Patient was scheduled for CT scan of the thorax (4-slice multi slice CT scanner- GE QX/I medical health care-Milwaukee). In scout view (Fig. 1B) widening of mediastinum is seen. In obtained axial sections a large leaking dissecting aortic aneurysm distal to left

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subclavian artery (type II) was seen. False lumen with thrombus in whole of its length suggesting of chronic dissection was noticed. Accompanying large soft tissue mass in mediastinum was also detected (Fig-2, 3).

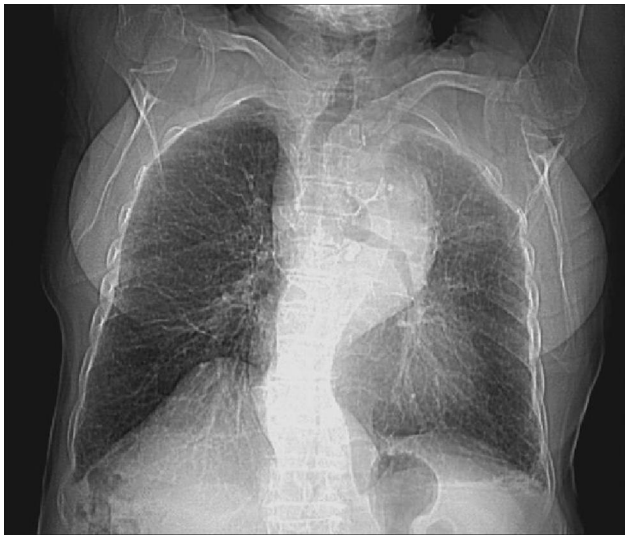

Figure 1-A

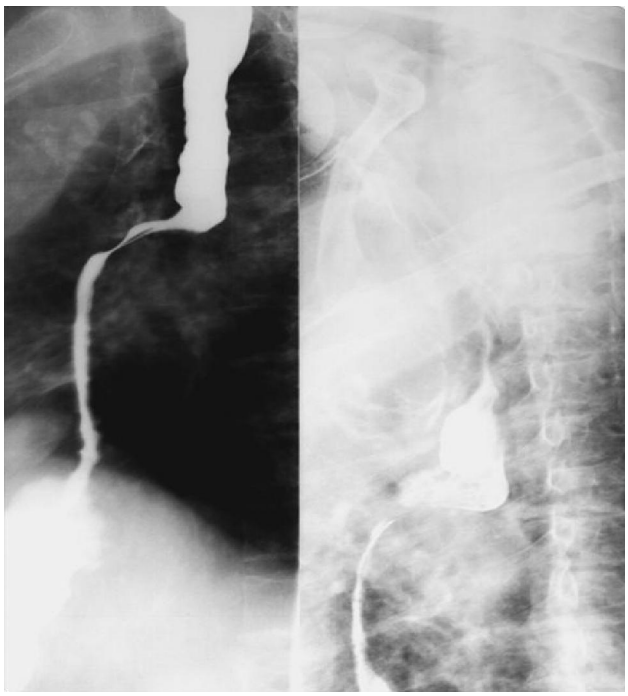

Figure 1-B

Figure 2-A

Figure 2-B

Linear densities in this mass is a sign of the leakage in a chronic mediastinal hematoma. There was also left upper lobe collapse with calcified foci and thickening of interlobular septae in both lungs suggestive of fibrotic changes due to an old infection.

Thrombosed false lumen was terminated distal to superior mesenteric artery (SMA) and celiac and SMA were originating from true lumen. hematoma and aneurysm caused pressure effect over esophagus with narrowing mid and lower third and dilatation of upper third of esophagus.

Figure 3-A

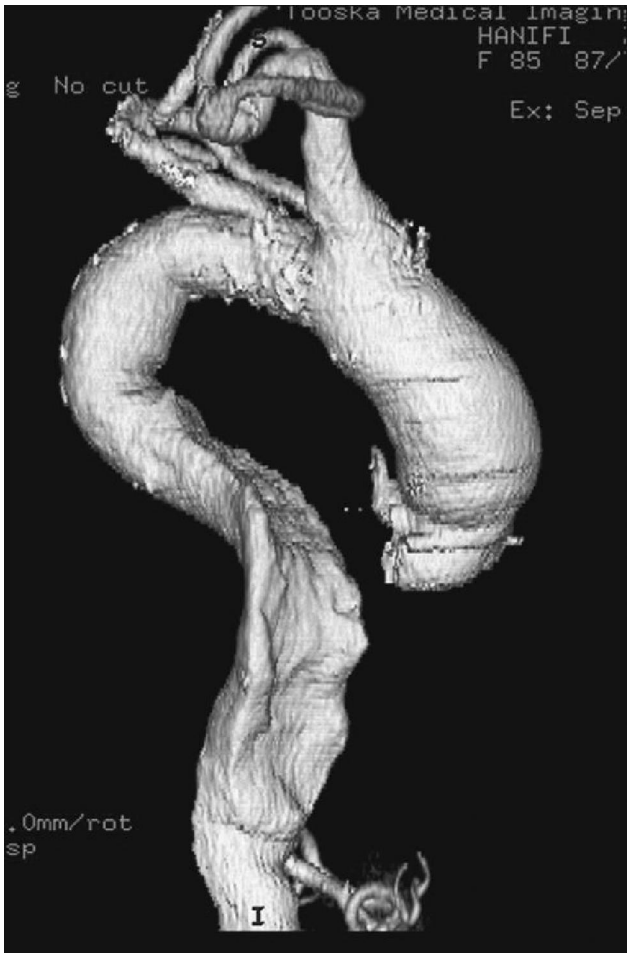

Figure 3-B

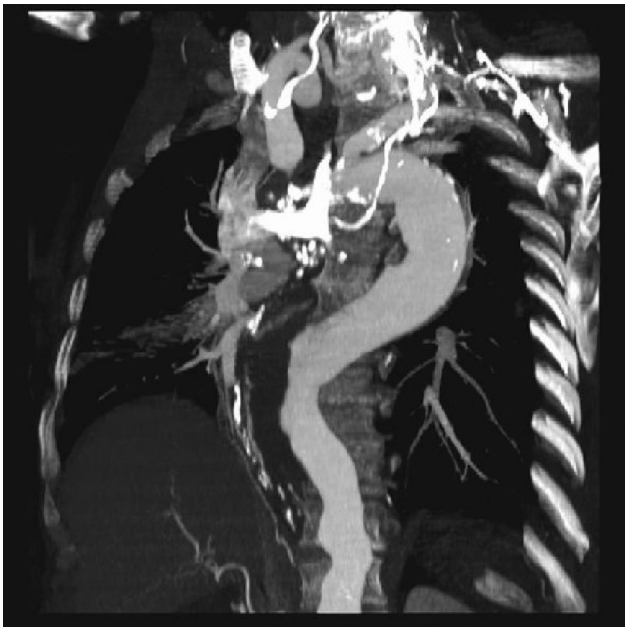

Figure 3-C

Calcified mediastinal lymph nodes were also seen. However aneurysm was not involved in subclavian artery but was dolicoectatic. The patient had no known risk factor or disease suggesting the etiology of the disease except that she was hospitalized several years ego for a chronic cough and respiratory symptoms which was due to tuberculosis (TB) after confirmation by gastric lavage culture. Patient was sent to cardiovascular surgery for grafting but due to large size of the aneurysm and high risk of surgery she was not scheduled for surgery and was sent for being observed.

Discussion

Pathogenesis of aortic involvement in TB is assumed to be due to peri aortic structures inflammation with secondary invasion of the artic wall by the bacilli. One of these structures is mediastinal lymph nodes. Another cause is pleuro-pericarditis of TB.[7] Patient may be represented with hemoptysis and cough,[8] pain and long standing fever, chill, generalized malaise,[7] weight loss,[2] dysphagia and hoarseness or Ortner's syndrome.[7,9] Aneurysm may exsanguinate which could be fatal.[10,11] Most of aortic aneurysm are discovered in autopsy,[11] however imaging modalities can help precise diagnosis of this entity. The interesting

point of this patient was 20 years delay between TB and presence of dysphagia and correlation between CT angiography findings and barium study. CT angiography using multiplanar reformation (MPR), maximum intensity projection (MIP) and volume rendering (VR) properties of this technology with its ability to asses aorta and its branch and other structures such as lung, heart and pleura help us to diagnose aneurysm easily and could show the extension of disease, involvement of other branch and organs and any other complication of the aneurysm like thrombosis or leakage. However most symptomatic aneurysm represented with severe symptoms in literatures, may show only with hoarseness or like our case with gradually progressive dysphagia. Hoarseness or Ortner's syndrome is due to pressure over recurrent laryngeal nerve by the aneurysm especially those with involvement of subclavian artery. In elderly patient any change in swallowing sensation must be evaluated curiously because many cause of dysphagia in this age group are not benign or may be due to an aneurysm which needed to have more attention because of high risk of perforation. Stenting of the aneurysm or resection of a pseudo aneurysm by surgery are the therapeutic treatment of choice however, in this case surgery was not performed due to patient poor general condition.

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