



## Giant pulmonary arteriovenous malformations

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**Received:** 02 November 2015

**Revised:** 26 December 2015

**Accepted:** 02 February 2016

### ARTICLE INFO

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### Keywords:

Tuberculosis; Arteriovenous malformation; Calcification; Lung

**Citation:** Larti F, Peiman S, Molaee S, Foroumandi M. **Giant pulmonary arteriovenous malformations.** *Case Rep Clin Pract* 2016; 1(2): 65-6.

### Introduction

A 37-year-old man presented to outpatient clinic with progressive dyspnea during daily activities. He reported history of dyspnea on exertion for more than one decade with worsening of his symptoms [Functional Class (FC) II of New York Heart Association (NYHA) classification] during last months. He had no history of chest pain, cough, hemoptysis or epistaxis.

Review of his medical records revealed history of pulmonary tuberculosis (TB) with associated empyema 14 years before (Figure 1), treated with tube thoracostomy and six-month anti-TB chemotherapy. He was non-smoker with no significant history of

environmental exposure. His vital signs were stable with oxygen saturation of 94% on room air. No signs of chest wall deformity, mucocutaneous telangiectasia, collateral vessel or digital clubbing were evident.

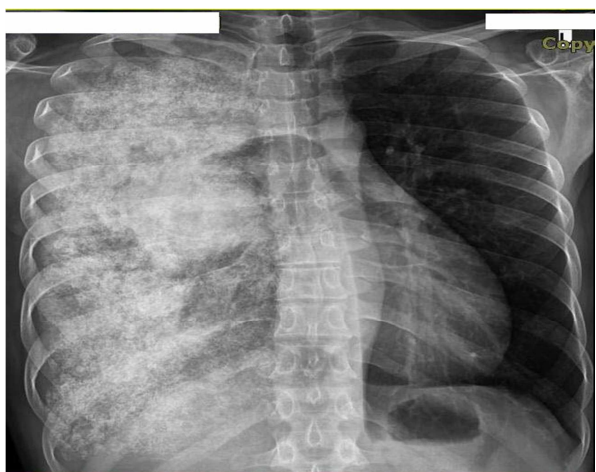
Decreased breath sounds in the right hemithorax and holosystolic murmur at the left sternal border (LSB) were heard. Chest X-ray showed opacified right hemithorax (Figure 2).

Contrast enhanced thoracic computed-tomography (CT)-scan revealed large aberrant vessel(s) in right lung field (Figure 3, arrows) with associated scattered round calcification within pleura and lung parenchyma compatible with phleboliths (Figure 3, arrowheads).

There was no evidence of intracardiac shunt or pulmonary hypertension in



**Figure 1.** An old thoracic computed-tomography (CT)-scan from 14 years before in patient's records; Pulmonary tuberculosis (TB) with associated empyema is visible.



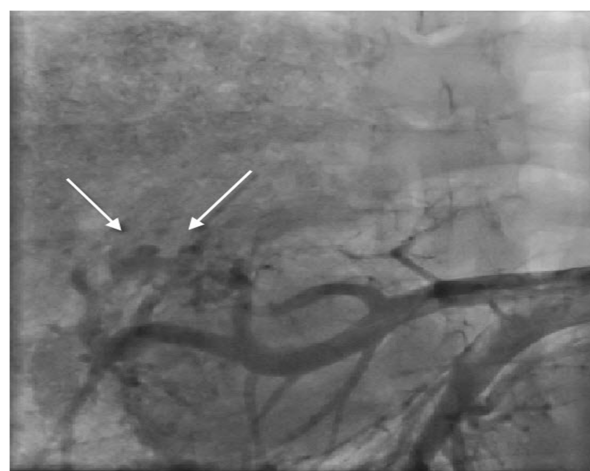
**Figure 2.** Chest X-ray; Opacified right hemithorax is visible.

echocardiography. Aortic and pulmonary artery angiography was performed that showed multiple arteriovenous malformations (AVMs) mainly feeding from right pulmonary artery branches (Figure 4, arrows) with contrast returning to left atrium via a large pulmonary vein brunch. Right pneumonectomy was recommended to the patient but he refused it due to high operative risk. He is now stable and on close medical follow-up.

Pulmonary arteriovenous malformation, as a congenital anomaly, is associated with hereditary hemorrhagic telangiectasia in up to 50% of cases (1). Percutaneous embolization is the treatment of choice but in our patient due to possible complication and low expertise for embolization of such a giant



**Figure 3.** Contrast enhanced thoracic CT-scan; Large aberrant vessel(s) in right lung field are visible.



**Figure 4.** Aortic and pulmonary artery angiography; Multiple arteriovenous malformations (AVMs) mainly feeding from right pulmonary artery branches are visible.

AVM, he referred for surgery (2).

### Conflict of Interests

Authors have no conflict of interests.

### Acknowledgments

None.

### References

1. Cottin V, Plauchu H, Bayle JY, Barthelet M, Revel D, Cordier JF. Pulmonary arteriovenous malformations in patients with hereditary hemorrhagic telangiectasia. *Am J Respir Crit Care Med* 2004; 169(9): 994-1000.
2. Gossage JR, Kanj G. Pulmonary arteriovenous malformations. A state of the art review. *Am J Respir Crit Care Med* 1998; 158(2): 643-61.