

Surrounding Air An Aortic Endoprosthesis As The Presenting Feature Of An Aortobronchial Fistula

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Citation

L Caminal-Montero, L Trapiella-Martínez, E Santamarta. *Surrounding Air An Aortic Endoprosthesis As The Presenting Feature Of An Aortobronchial Fistula*. The Internet Journal of Internal Medicine. 2007 Volume 7 Number 2.

Abstract

Aortobronchial fistulae are uncommon and fatal if untreated. Causes of aortobronchial fistulae include pulmonary tuberculosis, staphylococcal pneumonia, bronchogenic carcinoma, aortitis dissection and prosthetic vascular grafts in the thoracic aorta. Diagnosis relies on clinical suspicion and nonspecific features. We report a case where surrounding air an endoprosthesis was the presenting feature of and aortobronchial fistula.

INTRODUCTION

We discuss one case of a young woman with respiratory symptoms and a thoracic aortic endoprosthesis. The chest X-Ray showed air surrounding de stent, as the diagnosis feature of infected graft and aortobronchial fistula.

CASE REPORT

A 48-year-old woman was admitted to the hospital because of persistent fever, purulent sputum, mild haemoptysis and thoracic pain over three months. The patient had been in excellent health until four months before admission when she underwent an elective repair of a Stanford type B thoracic aortic dissection with an endoprosthesis. Several weeks later, she developed dyspnoea, fever and thoracic pain, and a computed tomography (CT) revealed an enlarged aneurysm and stenosis of the left main bronchus contacting the aorta. A bronchial stent was performed with initial improvement.

At admission, radiograph of the chest showed air surrounding the aneurysm and aortic endoprosthesis, that was confirmed by a new CT scan.

Figure 1

Figure 1: Frontal radiograph of the chest showing bronchial stent (arrow) and aortic endoprosthesis (arrowheads).

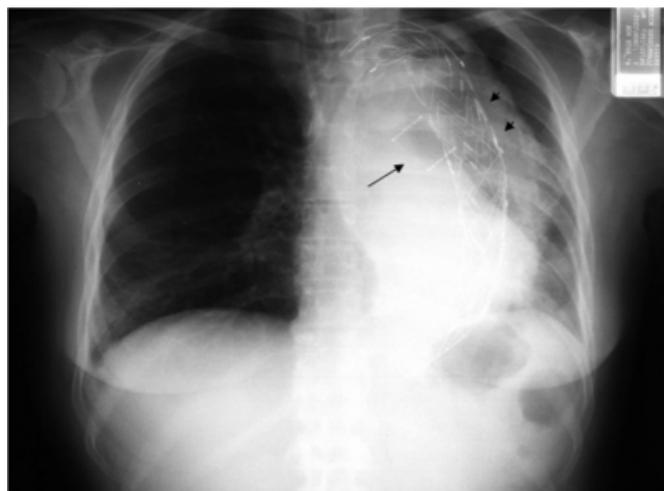


Figure 2

Figure 2: Lateral radiograph of the chest shows air surrounding the endoprosthesis (arrows) without lung infiltrates



A graft infection and aortobronchial fistula was suspected, and antibiotic treatment with vancomycin, piperacillin/tazobactam and rifampin was started. A thoracotomy was performed and the false lumen was opened. Pus was removed and *Streptococcus viridans* was isolated. The left lower lobe of the lung was resected and a Dacron patch banding was used to repair the pseudoaneurysm.

In spite of the surgery and antibiotic therapy, she developed recurrent haemoptysis. Residual lung was resected and an embolization of the internal thoracic artery was made. The patient improved and she was discharged. Nevertheless, she died at home few weeks later.

DISCUSSION

Thoracic aortic aneurysm (TAA) is a life-threatening condition. In the studies of natural history of TAA, the

overall survival rates at 5 years were 64%. (1). Surgical repair with graft replacement of the diseased aorta is the traditional treatment strategy although the rates of mortality and serious morbidity remain high, ranging from 5% to 10%. Recently, several reports have proposed endovascular stent-graft placement as an alternative treatment modality that may be associated with reduced morbidity and mortality. Endovascular approaches for the thoracic aorta disorders are generally well tolerated although there is little information about long term complications. (2). Aortobronchial fistulae are rare and have been reported after the implantation of prosthetic vascular graft in the thoracic aorta (3,4). Haemoptysis is the main symptom, and may be massive or intermittent. Aortobronchial fistula must be considered with the presence of lung infiltrates on the chest radiography, lung hemorrhage on CT or visualization of a pseudoaneurysm (5) although diagnostic examinations are often unable to visualize the fistula. In our patient air surrounding the endoprosthesis in the radiograph of the chest was the presenting feature of an aortobronchial fistula and infection of the graft, sign not reported previously.

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