

Nasopharyngeal culture is the most specific technique, but sensitivity is low (50%–70%) so other molecular biology techniques that also offer the possibility of rapid diagnosis<sup>2</sup> are recommended for achieving greater sensitivity (70%–99%).

## References

1. Diego Damiá A, Plaza Moral V, Garrigues Gil V, Izquierdo Alonso JL, López Viña A, Mullol Miret J, et al. Tos crónica. Normativa SEPAR. Arch Bronconeumol. 2002;38:236–324.
2. Moraga-Llop FA, Campins-Martí M. Nuevas perspectivas de la tosferina en el siglo XXI ¿Estamos fracasando en su control? Enferm Infecc Microbiol Clin. 2011;29:561–3.
3. Wright SW, Edwards KM, Decker MD, Zeldin MH. Pertussis infection in adults with persistent cough. JAMA. 1995;273:1044–6.

4. Campins Martí M, Moreno-Pérez D, Gil de Miguel A, González-Romo F, Moraga Llop F, Arístegui Fernández J, et al. Tos ferina en España. Situación epidemiológica y estrategias de prevención y control. Recomendaciones del Grupo de Trabajo de Tos ferina. Enferm Infecc Microbiol Clin. 2013;31:240–53.

Sonia Cepeda, Eva Martínez Moragón,\* Silvia Ponce

Servicio de Neumología, Hospital Universitario Dr. Peset, Valencia, Spain

\* Corresponding author.

E-mail address: [evamartinezmoragon@gmail.com](mailto:evamartinezmoragon@gmail.com) (E. Martínez Moragón).

## Conservative Approach in Bronchial Artery Aneurysm Rupture: A Therapeutic Option<sup>☆</sup>



### El abordaje conservador para la rotura de un aneurisma en la arteria bronquial: una opción terapéutica

To the Editor:

Bronchial artery aneurysm (BAA), corresponding to a vascular caliber greater than 2 mm,<sup>1</sup> has been reported in only 50 cases in the literature to date. Mizuguchi et al.<sup>2</sup> mention that only 12 BAA ruptures were described in England before 2009. The ideal approach in this situation remains controversial. A minimally invasive endovascular embolization technique showed greater efficacy and safety than thoracotomy<sup>3,4</sup> but with a conservative approach, clinical stability of the patient can be maintained without increasing operative morbidity.

We present the case of a 75 year-old man admitted to the emergency department of our hospital with dyspnea, a single episode of hemoptysis and sudden pain in the right hemithorax. The patient had diabetes, hypertension, COPD and reported triple coronary by-pass in 2009. The chest X-ray showed right pleural effusion and the origin of the bleeding was determined with thoracentesis. The

patient was hemodynamically stable (hemoglobin 10 g/dl, blood pressure 110/70 mmHg) but displayed slight hyperventilation with normal blood gases (SO<sub>2</sub> 95.2%, PO<sub>2</sub> 90.8 mmHg, and PCO<sub>2</sub> 24.1 mmHg) and sinus tachycardia (115–120 beats per minute) on ECG. Video-assisted thoracoscopy (VAT) was performed and 2000 cm<sup>3</sup> of blood removed, although there was no evidence of any source of bleeding in the pleura, diaphragm or lung. The mediastinum appeared swollen, convex, congested and contained blood, as demonstrated by needle aspiration. Within 24 h of this minimally invasive method, three-dimensional thin-section computerized tomography (3D-TSCT) of the thorax showed a conspicuous hematoma in the posterior mediastinum, pulmonary artery ectasia, predominantly on the left (4.6 cm), and a right BAA (6 mm × 5 mm in diameter) in the area of the hematoma, that was most probably the site of the previous bleeding. On the basis of radiological assessment, we decided to avoid the surgical approach and opted for conservative treatment. Pleural drainage was discontinued on postoperative day 4 and the patient was discharged on day 6, following a repeat chest 3D-TSCT, which showed a drastic reduction of mediastinal hematoma. The follow-up with 3D-TSCT at 4 months and 1 and 2 years revealed resolution of the BAA and total resolution of hemomediastinum. Etiology of BAA can be attributed to increased blood flow, high pressure in the pulmonary artery or various lung diseases.<sup>5</sup>



**Fig. 1.** The bronchial artery, originating from the convex surface of the aortic arch to the limit with descending aorta, displayed tortuous and hypertrophic aneurysm (arrow) in a wide hemomediastinum.

<sup>☆</sup> Please cite this article as: Divisi D, de Vico A, Crisci R. El abordaje conservador para la rotura de un aneurisma en la arteria bronquial: una opción terapéutica. Arch Bronconeumol. 2015;51:473–474.

Several factors intervened in our choice of a conservative approach: (a) control of bleeding due to the obliteration of the vessel by mediastinal hematoma; (b) the resolution of blood effusion in the pleural cavity after VAT; (c) previous myocardial revascularization (using the left internal mammary artery) with mediastinal fibrosis, making open BAA access difficult; (d) good hemodynamic status. In view of the patient's stable condition, we used VAT as a first-line approach. Moreover, sinus tachycardia and hyperventilation could be symptoms of a worsening general status, requiring an urgent non-targeted approach. Video-assisted thoracoscopy has proved to be ideal for emptying and cleaning the pleural cavity and allowed us to determine that the bleeding originated in the mediastinum (Fig. 1).

## References

1. Furuse M, Saito K, Kunieda E, Aihara T, Touei H, Ohara T, et al. Bronchial arteries: CT demonstration with arteriographic correlation. *Radiology*. 1987;162:393-8.

2. Mizuguchi S, Inoue K, Kida A, Isota M, Hige K, Aoyama T, et al. Ruptured bronchial artery aneurysm associated with bronchiectasis: a case report. *Ann Thorac Cardiovasc Surg*. 2009;15:115-8.
3. Hung SW. Where is the ruptured bronchial artery aneurysm. *Eur J Cardiothorac Surg*. 2010;38:389-90.
4. Yoon W, Kim JK, Kim YH, Chung TW, Kang HK. Bronchial and nonbronchial systemic artery embolization for life-threatening hemoptysis: a comprehensive review. *Radiographics*. 2002;22:1395-409.
5. Tanaka K, Ihaya A, Horiuchi T, Morioka K, Kimura T, Uesaka T, et al. Giant mediastinal bronchial artery aneurysm mimicking benign esophageal tumor: a case report and review of 26 cases from literature. *J Vasc Surg*. 2003;38:1125-9.

Duilio Divisi,\* Andrea de Vico, Roberto Crisci

Department of Thoracic Surgery, University of L'Aquila, "G. Mazzini" Hospital, Teramo, Italy

\* Corresponding author.

E-mail address: [duilio.divisi@aslteramo.it](mailto:duilio.divisi@aslteramo.it) (D. Divisi).

## Keratinolytic Fungi in the Feather Stuffing of a Sofa: A Rare Cause of Hypersensitive Pneumonitis<sup>☆</sup>



### Hongos queratinolíticos en el relleno de plumas de un sofá: una causa poco frecuente de neumonitis por hipersensibilidad

#### Clinical Case Report

We report the case of a 56-year-old man, former smoker, with a history of dyslipemia, gastroesophageal reflux, and idiopathic pulmonary fibrosis, referred from another hospital for investigation of progressive interstitial disease. He had been employed as a firefighter and a farm worker. He had contact with chickens and also had a feather sofa. No significant family history was reported.

One year previously, he had presented with pleuritic central chest pain, fever, dry cough, and progressive dyspnea, initially thought to be idiopathic pulmonary disease. All possible sources of domestic exposure were ruled out, and the patient was treated with prednisone 30 mg/day for 3 months, and then with N-acetylcysteine 1800 mg/day, but continued to deteriorate clinically. On physical examination, crackles were heard on lung auscultation and nail clubbing was noted. Autoimmune markers were normal. The only significant finding was raised anti-*Aspergillus fumigatus* and anti-*Penicillium* spp. IgG antibodies. Lung function testing showed forced expiratory volume in 1 s (FEV1) of 62%, forced vital capacity (FVC) 62%, FEV1/FVC ratio of 76%, generally reduced lung volumes, and diffusing capacity for carbon monoxide of 54%. He had moderate hypoxemia and normocapnia. In the walk test, he achieved 600 m, with oxygen saturation falling to 87%. Computed tomography showed a pattern inconsistent with usual interstitial pneumonia (Fig. 1). Bronchoalveolar lavage was performed, revealing cellularity and predominant neutrophils. Cryobiopsy was also obtained from the right basal segment. Histology examination showed pulmonary parenchyma with predominantly reactive interstitial histiocytosis suggestive of hypersensitive pneumonitis.

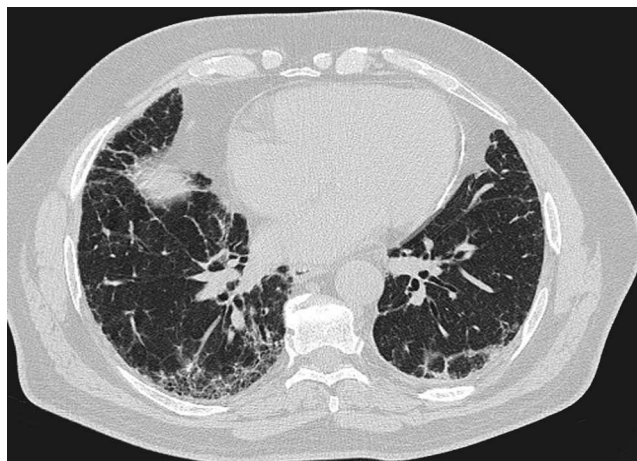
We suspected that some contact element was causing the clinical picture, so feathers from the sofa were cultivated and *Aspergillus fumigatus* was isolated. The case was diagnosed as chronic hyper-

sensitive pneumonitis (HP), caused by exposure to this mold. Treatment began with prednisone 30 mg/day, and exposure to the antigen was eliminated. Clinical and functional improvement occurred within a few months.

#### Discussion

This is the first reported case of HP caused by exposure to the feather stuffing of a sofa colonized by *Aspergillus fumigatus*.

Differential diagnosis between advanced chronic HP and idiopathic pulmonary fibrosis is difficult and can only be achieved by intensive investigation of potential exposure to antigens.<sup>1,2</sup> Some molds (*Aspergillus*, *Acremonium*, *Alternaria*, *Beuveria*, *Curvularia*, *Paecilomyces* and *Penicillium*) synthesize keratinases, which degrade keratin in feathers.<sup>3</sup> If the clinical picture is compatible, the presence of disease should be considered in patients with raised IgG antibodies to these antigens.<sup>4,5</sup> In our case, anti-*Aspergillus fumigatus* IgG levels were very high, and as this mold was found in an element to which the patient was continually exposed, this anti-



**Fig. 1.** High-resolution computed tomography of the chest showing subpleural reticular opacities with traction bronchiectasis and subpleural honeycombing images, mainly in the lower lobes. No evaluable air trapping is seen in the sections on expiration. These images suggest a pattern consistent with usual interstitial pneumonia (according to the ATS/ERS/JRS/ALAT consensus criteria on the diagnosis and management of idiopathic pulmonary fibrosis, 2011).

<sup>☆</sup> Please cite this article as: Hernandez-Gonzalez F, Xaubet A, Sellarés J. Hongos queratinolíticos en el relleno de plumas de un sofá: una causa poco frecuente de neumonitis por hipersensibilidad. *Arch Bronconeumol*. 2015;51:474-475.