Conflict of Interests

The authors state that they have no conflict of interests.

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Pedro Landete, Eusebi Chiner,* José Norberto Sancho-Chust, Patricia Pérez-Ferrer

Servicio de Neumología, Hospital Universitario San Juan de Alicante, San Juan, Alicante, Spain

* Corresponding author.
E-mail address: echinervives@gmail.com (E. Chiner).

Pertussis in Adults: A Growing Diagnosis in the Pulmonology Clinic☆

Tos ferina del adulto: una enfermedad emergente en la consulta del neumólogo

To the Editor,

Although cough following pertussis infection is one of the causes of chronic cough[1] (Table 1), this entity is rarely suspected in adults. Recent data, however, show that pertussis control is failing, and outbreaks[2] affecting adults are being reported, due to gradual loss of the immunity acquired with childhood vaccination. We report the case of a 40-year-old woman with persistent cough who was referred to a specialized asthma clinic where the final diagnosis of pertussis was made.

This was a 40-year-old woman, with no toxic habits and no routine medication. Her only disease history was squamous cell carcinoma of the buccal mucosa treated with radiation therapy administered to the right side of the face and neck 2 years previously. Response was complete. On this occasion, she presented dry cough, post-nasal drip and rhinorrhea that were treated with azithromycin, antihistamines and nasal corticosteroids, with mild initial improvement. One week later, however, the cough increased and she had her first attack of convulsive cough with laryngeal spasm. Episodes of paroxysmal cough increased in frequency until they occurred daily, with sudden onset, predominantly at night. She was assessed by the eye, nose and throat (ENT) specialist, who ruled out ENT disease and referred the patient to the asthma clinic. The patient was prescribed inhaled and systemic corticosteroids, with no improvement. Chest X-ray and lung function test results were normal, and the bronchodilator test was negative with oral exhalation of nitric oxide levels of 5 ppb. Laboratory tests revealed 13 300 leukocytes/mm^3 with 77% neutrophils. Pertussis was suspected clinically, so a culture of pharyngeal exudate for *Bordetella pertussis* was requested, for which genomic detection was positive. Diagnosis was confirmed 9 weeks after onset of clinical symptoms. All treatment was discontinued, and the patient's cough abated gradually, until it was completely resolved. Her vaccination calendar was reviewed, showing that she had received 3 doses of the diphtheria-tetanus-pertussis (DTP) vaccine at age 10, 11 and 16 months, and 2 booster doses at 3 and 13 years.

Pertussis is a highly contagious acute respiratory infection of the upper respiratory tract caused by the bacteria *Bordetella pertussis*. It is characterized by episodes of highly limiting violent coughing, occasionally accompanied by whooping on inspiration. Humans are the only known reservoir of infection and the mechanism of transmission is direct contact with secretions from infected respiratory mucosa. After incubation (7–10 days) and a catarrhal period with non-specific symptoms (1–2 weeks), the paroxysmal phase begins (2–4 weeks) with convulsive cough followed by deep inspiration against a closed glottis at the end of the paroxysm, which produces the typical whoop. It gradually resolves after 3 months, but the incidence of residual cough in adults can be as high as 50%.[3] In these patients, clinical symptoms are more latent: cough is severe and prolonged, mainly at night, and less paroxysmal than in children,[4] which contributes to underdiagnosis. In our case, the diagnostic delay was considerable: asthma was suspected and the patient even received treatment with oral corticosteroids. It is our opinion, then, that pulmonologists should not overlook pertussis in patients with persistent cough. Once suspected, diagnosis is simple.

Table 1
Causes of Chronic Cough.

Causes of chronic cough
Common causes
– Post-nasal drip (8%–87%)
– Asthma (20%–33%)
– Gastroesophageal reflux (10%–21%)
– Eosinophilic bronchitis (13%)
– Chronic bronchitis and COPD (5%)
– Bronchiectasis (4%)
– Lung cancer (2%)
– Medications: ACE inhibitors (0.2%–32%), and others
– Diffuse interstitial lung diseases
– Postinfectious cough (11%–25%): virus, *Mycoplasma pneumoniae*, *Chlamydia pneumoniae* and *Bordetella pertussis*
Uncommon causes
– Psychogenic cough
– Occult lung infection
– Immunological diseases: temporal arteritis, Sjögren's syndrome, etc.
– Left heart failure
– Mass or aspirated foreign body
– "Bronchitis" due to toxic occupational exposure
– Nasal polyposis. Rhinoliths
– Occipital neuralgia
– Tracheobronchomalacia
– Mediastinal diseases: Hodgkin's lymphoma
– Upper airway obstruction: tracheal, laryngeal or thyroid tumors, vascular malformations
– Central nervous system diseases
– Myopathies
– Gilles de la Tourette syndrome

Source: Taken from SEPAR guidelines on chronic cough.[1]

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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[2] are recommended for achieving greater sensitivity (70%–99%).

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Sonia Cepeda, Eva Martínez Moragón,* Silvia Ponce

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

* Corresponding author.
E-mail address: evamartinezmoragon@gmail.com
(E. Martínez Moragón).

Conservative Approach in Bronchial Artery Aneurysm Rupture: A Therapeutic Option☆

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,[1] has been reported in only 50 cases in the literature to date. Mizuguchi et al.[2] 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[3,4] 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_2 95.2%, PO_2 90.8 mmHg, and PCO_2 24.1 mmHg) and sinus tachycardia (115–120 beats per minute) on ECG. Video-assisted thoracoscopy (VAT) was performed and 2000 cm^3 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.[5]

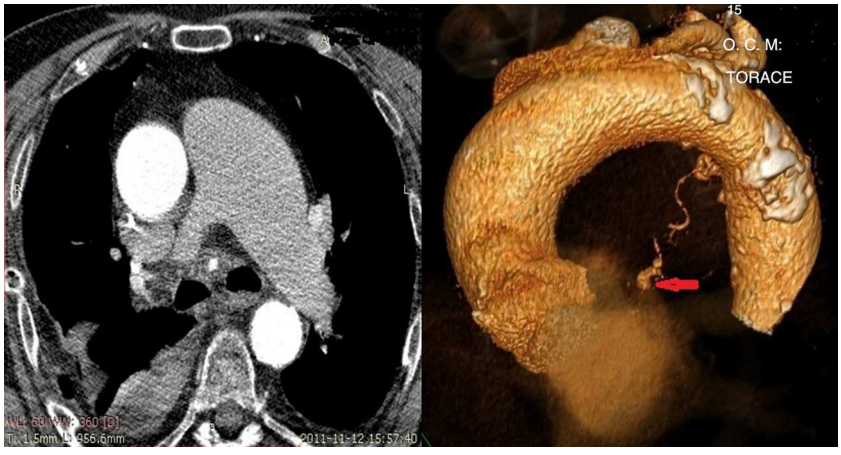

Fig. 1. The bronchial artery, originating from the convex surface of the aortic arch to the limit with descending aorta, displayed tortuous and hypertrophic aneurysm (arrow) in a wide hemomediastinum.

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