Endobronchial Tuberculosis Simulating Lung Cancer☆

Tuberculosis endobronquial como simulador de cáncer de pulmón

To the Editor:

Tuberculosis (TB) still has an annual incidence in Spain of 18.2/100,000 inhabitants.[1] We report a case of endobronchial tuberculosis with lymph node and skin involvement, an unusual form in our setting.

A 45-year-old woman who had been resident in India until 8 months previously, presented with clinical symptoms for the last 3 months of daily fever (up to 38 °C), anorexia, weight loss, dry cough, and dyspnea that did not improve after 7 days of treatment with amoxicillin–clavulanic acid. She had good general health upon examination, the only remarkable finding being two mobile, rubbery subcutaneous nodules sized 1 cm in the left upper quadrant that were slightly painful but with no signs of inflammation, and a similar one in the left hand. Blood tests revealed anemia, leukocytosis and thrombocytosis. Chest radiography showed a mass in the anterior mediastinum described in the computed tomography (CT) report as "mass in the left upper lobe and ipsilateral hilar region, with anterior mediastinal infiltration causing stenosis of the bronchial lumen; ipsilateral subcarinal and paratracheal lymphadenopathies, accompanied by multiple independent nodules in the left lung, pleural implants, and subcutaneous abdominal nodules". Bronchoscopy revealed inflamed mucosa with implants of tumor-like appearance and left bronchial stenosis. Malignancy was ruled out after biopsy, but both bronchial biopsies and one of the abdominal nodes showed non-necrotizing granulomas. Cultures were initially negative, but then multi-susceptible *Mycobacterium tuberculosis* grew in sputum. Accordingly, the patient was diagnosed with disseminated TB with tumor-type endobronchial and skin involvement. The patient improved rapidly with TB therapy and corticosteroids. Bronchoscopy was normal at 6 months, while the CT showed only residual thickening of soft tissues (Fig. 1).

Endobronchial TB occurs in 5%–40% of active pulmonary TB, although it is underdiagnosed.[2,3] The cause is implantation directly from an adjacent cavity, a focus of tuberculosis or a mediastinal lymph node, or by bloodborne or lymphatic spread.[3,4] Symptoms include cough (71%–100%), fever (50%), weight loss (30%), hemoptysis (18%–25%), dyspnea, chest pain and anorexia.[2,4,5] Both the duration of symptoms and the disease progression are variable and can range from complete resolution to the appearance of bronchiectasis, bronchial obstruction or atelectasis. The most useful microbiological test is bronchoalveolar lavage, which outperforms sputum.[2–5] X-ray may show alveolar infiltrates (35%–43%), nodules (25%), cavitated lesions (12%), pleural effusion (9%) or hilar thickening (7%), but it may be normal in 10%–20% of cases.[2,3] CT is useful for assessment of disease extension, degree of bronchial obstruction and progress, and may replace bronchoscopy during follow-up,[4] although it is the imaging study of choice during diagnosis.

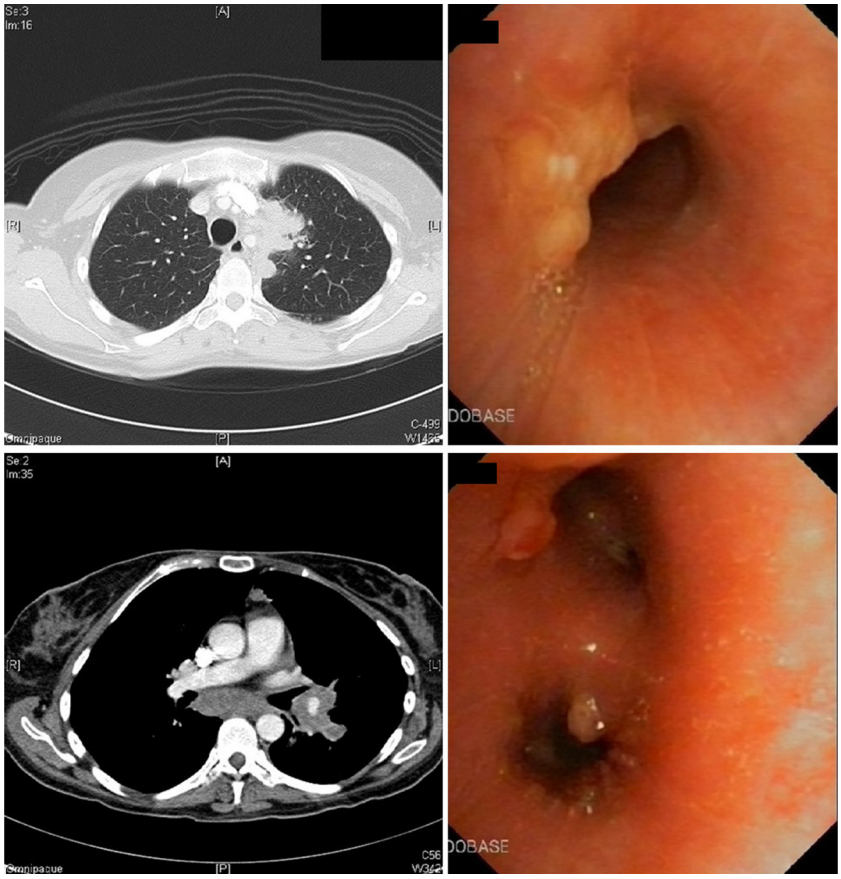

Fig. 1. Bronchoscopy and CT images before treatment.

☆ Please cite this article as: Cadiñanos Loidi J, Abad Pérez D, de Miguel Buckley R. Tuberculosis endobronquial como simulador de cáncer de pulmón. Arch Bronconeumol. 2014;50:126–127.

Chung and Lee classify TB into seven subtypes[3]: caseating (12%–43%), edematous-hyperemic (14%–44%), fibrostenotic (6%–10.5%), tumoral (10.5%–30%),[3–5] granular, ulcerative, and nonspecific bronchitis type. The first four have a poorer prognosis, because of associated bronchial stenosis.[3] These types seem to represent different stages of the same disease, starting with granulomas and submucosal inflammatory lesions that progress to masses, fibrosis and airway stenosis.[4,5] The tumoral subtype has endobronchial masses, with a hemorrhagic surface and a necrotic outer layer, simulating squamous carcinoma. Risk factors for residual bronchial stenosis are age over 45 years, fibrostenotic type, and late diagnosis.[2,5] Treatment includes endoscopic dilation, mechanical resection, or stenting combined with corticosteroids. The latter seems to be effective in the early stages and the caseating/tumoral forms,[4] so for this reason they were used in our patient, who achieved total recovery.

In the presence of fever and endobronchial lesions or pulmonary mass, consideration of TB at diagnosis is mandatory, especially in immigrants during the early years after arrival.

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Severe Asthma Exacerbation in an Intermediate Respiratory Care Unit: Fact or Controversy?☆

Agudización grave de asma en una unidad de cuidados respiratorios intermedios: ¿realidad o controversia?

To the Editor:

The development of respiratory intermediate care units (RICUs) has allowed for better care of patients with acute respiratory failure (ARF) of diverse etiology.[1] RICUs are beneficial for patients requiring noninvasive ventilation (NIV). In the case of severe asthma exacerbations (SAE), the use of NIV remains controversial.[2]

We read with interest the original study by Núñez et al.[3] analyzing the progress of patients with SAE at an RICU. This important contribution highlights the importance of these units. However, in our opinion, there are some aspects of this study that need to be clarified.

A. In the selection of patients, the date of diagnosis, reversibility of bronchial obstruction, family history, and other features supporting diagnosis are unknown. Among SAE patients admitted to RICU, 37% were active smokers or former smokers. Furthermore, of the ten patients receiving NIV, five were obese and three had kyphoscoliosis.

This gives rise to the following questions: How many patients had asthma? How many had COPD and not asthma? NIV can be effective, even in patients with COPD and pneumonia (the most frequent finding in RICU patients). This leads us to wonder whether the patients with kyphoscoliosis and obesity had chronic hypoventilation and whether they could have benefited from NIV.

B. Regarding the definition of SAE, according to the GINA guidelines, patients with severe asthma flare-up can have a peak flow of <60% of the known or theoretical maximum value, or else <100 l/min and/or PaO_2 < 60 mmHg.[4] The average peak flow in RICU patients is substantially greater, so airflow limitation might not be the most influential factor in the blood-gas deterioration. The physical examination parameters suggested by the GINA guidelines – alertness, use of accessory muscles, respiratory and heart rate, etc. – have not been reported.

A description of the authors' recommendations on the criteria for RICU admission would be interesting. Might SAE patients benefit from RICU monitoring, whether they receive NIV or not? We believe that if the previous recommendations are met, the answer is yes, and in this way prompt attention can be guaranteed, if necessary.[5]

In any case, this study does not allow conclusions to be drawn on the effect of NIV in patients with SAE, although we accept that this is not its purpose. Studies of NIV in SAE have been carried out in emergency departments. The use of NIV has been associated with an improvement in lung function and respiratory mechanics, but no changes have been observed in hospitalization or intubation rates. These objectives should be included in future studies, and appropriate selection criteria and methodology – mode and ventilation parameters, interface type, hours of ventilation, aerosol methodology, etc. – should be employed.[2]

With regard to economic aspects, we agree that RICUs are cost-effective, but, again, the methodology of this study limits conclusions.

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☆ Please cite this article as: Navarro Esteva J, Esquinas Rodríguez AM. Agudización grave de asma en una unidad de cuidados respiratorios intermedios: ¿realidad o controversia? Arch Bronconeumol. 2014;50:127.