

ABPA mimicking bronchogenic cancer

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Key words: allergic bronchopulmonary aspergillosis; bronchial asthma; bronchoscopy; fungal hyphae; lung cancer; mucoid impaction.

● WE report a case of bronchopulmonary aspergillosis (ABPA) that was exceptional because, firstly, ABPA was diagnosed in a patient without evidence of asthma, and, secondly, the endobronchial mass found at bronchoscopy led to a misdiagnosis of bronchogenic carcinoma.

A 65-year-old man with a smoking history of 20 cigarettes a day from the age of 15 to 45 years had had persistent cough and some mucous expectoration for 5 months. A small infiltrate in the right upper lobe was seen on the chest roentgenogram, and complete obstruction of the apical and posterior segmental bronchi of the right upper lobe by a whitish irregular mass was detected by fiberoptic bronchoscopy. Microscopic examination of biopsies revealed fragments covered by respiratory epithelium with squamous metaplasia; an infiltration of lymphocytes, plasma cells, and neutrophils; edema; and focal necrosis. Ziehl-Neelsen and periodic acid-Schiff stains of biopsy samples were negative. A computed tomography (CT) scan of the chest disclosed a nodular mass in the right

Mucoid impaction of bronchi in a nonasthmatic patient.

upper lobe with a peribronchovascular infiltrate that spread to the hilum. With the diagnosis of bronchogenic carcinoma, a thoracotomy with atypical resection of the apical and posterior segments of the right upper lobe was performed. Bronchi filled with abundant mucoid material with areas of mixed infiltrate that disrupted the bronchial wall were observed on microscopic examination of the surgical specimen, and a diagnosis of bronchiectasis with abscessed bronchopneumonia was made.

One year after operation, the patient was readmitted because of persistent cough, expectoration, and systemic symptoms of illness. Laboratory studies were negative except for a serum IgE level of 2370 U/ml. The chest roentgenogram showed bilateral perihilar alveolar infiltrates, but multiple transbronchial biopsies, and bacteriologic tests were unrevealing. Histopathologic review of the surgically excised lung tissue specimens revealed large bronchial dilations with the bronchial lumen filled with mucoid material and an inflammatory infiltrate. Infiltrating cells were mostly eosinophils. Small bronchioles showed disrupted walls and were filled with necrotic cellular remnants and an intense mixed inflammatory infiltrate, although without evidence of well-defined granulomas. Through the methenamine silver stain, septate hyphae of *Aspergillus* were clearly observed in the mucous plugs, and the diagnosis of ABPA was established. Precipitating antibodies and immediate skin reactivity to *Aspergillus* antigen were then observed. Treatment with oral prednisone resulted in a remarkable clinical response and resolution of the pulmonary infiltrate.

Cases of ABPA in nonasthmatic patients have been occasionally reported in the literature. In eight of the 19 cases of ABPA in nonasthmatic patients (1, 3-5), a bronchogenic carcinoma was initially suspected due to abnormalities in the chest roentgenogram (mostly atelectasis), but bronchoscopy revealed typical mucous plugs. By contrast, in our patient, the diagnosis of lung cancer was based on bronchoscopic findings of an endobronchial mass of malignant appearance, rather than on roentgenographic characteristics. Moreover, in addition to immediate skin reactivity to *Aspergillus* antigen, precipitating antibodies, and markedly elevated IgE, lung biopsy specimens were available in which the histopathologic features of ABPA were identified. The microscopic finding of mucoid impaction of bronchi in conjunction with noninvasive fungal hyphae is highly suggestive of ABPA (6). There is a previous description of such pathologic features in surgically excised lung tissue specimens (7). This study reports that operation was performed in five cases because of preoperative suspicion of neoplastic bronchial obstruction, which was found on the chest roentgenogram or at the time of bronchoscopy. Although the endoscopic findings are not described, this study (7) and the case reported here indicate that mucoid impaction of bronchi in ABPA may have the endoscopic appearance of bronchogenic carcinoma. Therefore, ABPA should be included in the differential diagnosis of bronchial obstruction of neoplastic aspect.

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Antibiotic-induced NSAID intolerance

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Key words: challenge test; drug association; NSAID intolerance.

● NONSTEROIDAL anti-inflammatory drugs (NSAID) are among the most useful drugs, but are the second most often incriminated in adverse drug reactions after antibiotics (1). NSAID intolerance or idiosyncrasy occurs in 1–5% of the general population.

According to the most accepted hypothesis, NSAID intolerance is based on inhibition of the cyclo-oxygenase-1 metabolic pattern (2). The lack of *in vitro* tests able to demonstrate this intolerance makes the diagnosis depend exclusively on drug challenge. The difficulty of the diagnostic work-up increases when the reaction requires the coexistence of more than one factor. A case of antibiotic-dependent NSAID intolerance is reported.

A 25-year-old woman was referred for allergologic work-up after two adverse reactions to amoxicillin. She had suffered a pruritic papular facial rash 3 days after starting therapy with amoxicillin (500 mg t.i.d.) 3 months previously. The second reaction consisted of generalized urticaria with foot and hand angioedema 10 min after taking 500 mg amoxicillin p.o. on day 3 of treatment. Both treatments had been prescribed, together with metamizol capsules (575 mg) for dental abscesses. Since these two episodes, she had tolerated metamizol intake on several occasions.

An allergologic work-up was performed. Specific IgE (Pharmacia FEIA CAP System, Pharmacia & Upjohn, Uppsala, Sweden) to

penicilloyl G and V, ampicillin, and amoxicillin were negative. Penicillin standard skin tests (prick and intradermal reaction) with penicilloyl-polylysine (PPL), minor determinant mixture (MDM), sodium penicillin G 10 000 IU, amoxicillin 20 mg/ml, and ampicillin 25 mg/ml at 15 min, and 48 and 96 h were negative. Simple blind challenges with penicillin G 1 000 000 IU and amoxicillin 500 mg were negative, and the patient was maintained on amoxicillin 500 mg t.i.d. for the following 3 days with no adverse effects.

One month later, the patient reported a pruritic papular facial rash together with hand and foot angioedema 10 min after intake of 500 mg lincomycin p.o., which she had started 3 days earlier with metamizol capsules for an odontologic process.

The study was resumed by performing a 500-mg lincomycin simple blind oral provocation test and maintaining a 500-mg t.i.d. schedule for 5 days, with good patient tolerance. Skin tests with metamizol (prick with 400 mg/ml and intradermal reactions with 0.4, 4, and 40 mg/ml) were negative, and a simple blind oral 575-mg challenge revealed no adverse reactions. The patient continued with 575 mg t.i.d. for 5 days with good tolerance.

A simple blind challenge test using amoxicillin 500 mg t.i.d. simultaneously with metamizol 575 mg t.i.d. was started. Twenty-four hours later, the patient presented with a pruritic papular facial rash, and the challenge was stopped. A simple blind challenge test with amoxicillin 500 mg t.i.d. together with diclofenac 50 mg b.i.d. was performed a week later with the same reaction. In an attempt to find a therapeutic alternative, an open challenge test combining amoxicillin 500 mg t.i.d. with nimesulide 100 mg t.i.d. for 5 days was performed, with good tolerance. The patient continued to use this drug association with no further adverse reactions.

Coadministration of an antibiotic was needed for a positive challenge.