Hemoptysis and Eosinophilia in a Young Woman*

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This 38-year-old woman had an episode of hemoptysis three weeks before admission. She denied productive cough, chest pain, fever, asthma, or other respiratory symptoms, acute or chronic. Physical examination revealed a healthy woman with normal temperature, pulse and respiration rates, and blood pressure. The lungs were clear to auscultation and percussion. Two telangiectases were present on the lower lip. Laboratory findings were as follows: Hct 36.7 percent, Hgb 13 gm percent, WBC 8,400 with 43 polys, 37 lymphocytes, 5 monocytes and 15 eosinophils. Roentgenograms (Fig 1 and 2) were obtained soon after admission.

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Diagnosis: Bronchial Adenoma with Mucoid Impaction

The PA chest roentgenogram (Fig 1) reveals a 2 cm right infra hilar pulmonary mass with a V-shaped branching peripherally. A smaller, similar shaped shadow could be seen on chest films one and three years earlier. An AP chest laminogram (Fig 2) confirms the findings.

The lesion was initially thought to be a pulmonary arteriovenous fistula, but pulmonary angiography was normal. A thoracic aortogram revealed a slightly enlarged right bronchial artery supplying but not opacifying the mass. Radiographic diagnosis of endobronchial tumor, most likely bronchial adenoma, with mucoid impaction of the distal segmental bronchi, was made.

Bronchoscopy demonstrated an endobronchial mass occluding the right lower lobe bronchus. The right middle and right lower lobes were resected. Pathologic examination revealed a well-differentiated, 2 cm bronchial adenoma (arrow), carcinoid type, occluding the right lower lobe bronchus (Fig 3). An irregular firm green gelatinous mucoid material formed casts that completely occluded several of the dilated right lower lobe segmental bronchi distal to the tumor (Fig. 4).

Bronchial mucoid impaction is associated with asthma or chronic bronchitis in 80 percent of cases.\(^1\)\(^-\)\(^3\) It is also seen with mucoviscidosis and allergic aspergillosis. The thick tenacious mucus inspissates, causing obstruction and dilatation of the 2nd, 3rd, and 4th order bronchi. The lung peripheral to the mucous plugs remains aerated via the pores of Kohn, although obstructive emphysema or atelectasis less commonly occur. The mucoid impaction may cause a chronic productive cough, chest pain, or hemoptysis. Expectoration of the mucous plugs may cause clearing of the chest roentgenogram, but bronchiectasis may remain at the impaction site. Clearing of the mucoid impactions in one area and appearance in another is characteristic.

Eosinophilia of the peripheral blood smear is often present, as in this patient. The radiographic differential diagnosis includes bronchogenic carcinoma, lung abscess, and Löffler's pneumonia. In this patient the obstructing bronchial adenoma led to mucoid impaction of the bronchi.\(^4\)

REFERENCES