

Chronic eosinophilic pneumonia: Short communication

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Abstract

Background: We report here a unique case of chronic eosinophilic pneumonia (CEP) masquerading as bronchogenic malignancy. A 59-year-old woman presented with a chronic cough that had persisted for over 2 months and an abnormal chest radiograph. Chest computed tomography (CT) followed by a bronchoscopy revealed airspace consolidation and an endobronchial mass-like lesion. Histopathologic examination of the mass revealed a significant accumulation of eosinophils and lymphocytes in the bronchial epithelium with no evidence to indicate the presence of a carcinoma. Bronchoalveolar lavage revealed that eosinophils made up 35% of the cellular infiltrate. After steroid therapy, the patient's symptoms were completely alleviated and the endobronchial lesion was no longer detectable.

Keywords: Chronic eosinophilic pneumonia, Endobronchial mass, Steroid

Accepted on Dec 20, 2020

Introduction

Chronic eosinophilic pneumonia (CEP) is an idiopathic condition characterized by the alveoli filling with an inflammatory, eosinophil-rich infiltrate. Classically on imaging, it appears as chronic consolidation with upper zone and peripheral predominance.

Eosinophilic pneumonia may be a disease during which an eosinophil, a kind of white blood corpuscle, accumulates within the lungs. These cells cause disruption of the traditional air spaces (alveoli) where oxygen is extracted from the atmosphere. Several different sorts of eosinophilic pneumonia exist and may occur in any age bracket. The foremost common symptoms include cough, fever, difficulty breathing, and sweating in the dark. Eosinophilic pneumonia is diagnosed by a mixture of characteristic symptoms, findings on a physical examination by a health provider, and therefore the results of blood tests and X-rays. Prognosis is superb once most eosinophilic pneumonia is recognized and treatment with corticosteroids is begun.

Pathophysiology: Eosinophilic pneumonia can develop in several alternative ways counting on the underlying explanation for the disease. Eosinophils play a central role in defending the body against infection by parasites. Many diseases, like asthma and eczema, are caused when eosinophils overreact to environmental triggers and release an more than chemicals, e.g., cytokines and histamine. The common characteristic among different causes of eosinophilic pneumonia is eosinophil overreaction or dysfunction within the lungs.

- Parasitic infections
- Acute and Chronic Eosinophilic Pneumonia
- Medications and environmental exposures

Epidemiology: Eosinophilic pneumonia may be a rare disease. Parasitic causes are commonest in geographic areas where each parasite is endemic. Acute eosinophilic pneumonia can occur at any age, even in previously healthy children, though most patients are between 20 and 40 years aged. Men are affected approximately twice as frequently as women. Acute eosinophilic pneumonia has been related to smoking. Chronic eosinophilic pneumonia occurs more frequently in women than men and doesn't appear to be associated with smoking. An association with radiation for carcinoma has been described.

Diagnosis: Eosinophilic pneumonia is diagnosed in one among three circumstances: when an entire blood count reveals increased eosinophils and a chest X-ray or computerized tomography identifies abnormalities within the lungs, when a biopsy identifies increased eosinophils in lung tissue, or when increased eosinophils are found in fluid obtained by a bronchoscopy (bronchoalveolar lavage fluid). Association with medication or cancer is typically apparent after review of an individual's medical record. Specific parasitic infections are diagnosed after examining an individual's exposure to common parasites and performing laboratory tests to seem for likely causes. If no underlying cause is found, a diagnosis of acute or chronic eosinophilic pneumonia is formed based upon the subsequent criteria.

Acute eosinophilic pneumonia is presumably with respiratory failure after an acute febrile illness of usually but one week, changes in multiple areas and fluid within the area surrounding the lungs on a chest X-ray, and eosinophils comprising quite 25% of white blood cells in fluid obtained by bronchoalveolar lavage. Other typical laboratory abnormalities include an elevated white blood corpuscle count, erythrocyte sedimentation rate, and immunoglobulin G level. Pulmonary function testing usually reveals a restrictive process with reduced diffusion capacity for carbon monoxide gas. Chronic eosinophilic pneumonia is presumably when the symptoms are present for quite a month. Laboratory tests typical of chronic eosinophilic pneumonia include increased levels of eosinophils within the blood, a high erythrocyte sedimentation rate, iron deficiency anemia, and increased platelets. A chest X-ray can show abnormalities anywhere, but the foremost specific finding is increased shadow within the periphery of the lungs, far away from the guts.

Differential diagnosis

- Asthma
- Environmental allergy
- Granulomatosis with polyangiitis
- Allergic bronchopulmonary aspergillosis
- Churg-Strauss syndrome
- Loeffler's syndrome

Treatment: When eosinophilic pneumonia is said to an illness like cancer or parasitic infection, treatment of the underlying cause is effective in resolving the lung disease.

When thanks to acute or chronic eosinophilic pneumonia, however, treatment with corticosteroids leads to a rapid, dramatic resolution of symptoms over the course of 1 or two days. Either intravenous methylprednisolone or oral prednisone are most ordinarily used. In acute eosinophilic pneumonia, treatment is typically continued for a month after symptoms disappear and therefore the X-ray returns to normal (usually four weeks total). In chronic eosinophilic pneumonia, treatment is typically continued for 3 months after symptoms disappear and therefore the X-ray returns to normal (usually four months total). Inhaled steroids like fluticasone are used effectively when discontinuation of oral prednisone has resulted in relapse. Because eosinophilic pneumonia affects the lungs, individuals develop difficulty breathing. If enough of the lungs are involved, it's going to not be possible for an individual to breathe without support. Non-invasive machines like a bilevel positive airway pressure machine could also be used. Otherwise, placement of a breathing tube into the mouth could also be necessary and a ventilator could also be wont to help the person breathe.

Corticosteroids: The mainstay of treatment is predicated on oral corticosteroid (OCS) therapy, with a goal of inducing remission also as reducing the likelihood of relapse.

Treatment dose and duration: There are not any firm dose or duration guidelines. the general goal is to take care of continued clinical improvement on rock bottom possible dose of OCS so as to avoid relapse but also minimize steroid-related side effects.

Relapse: Although the long-term prognosis of the disease is sweet for several patients, relapse rates are high during this disease process particularly when trying to taper or discontinue OCS therapy.

Biologic agents: Most of other therapies are described just in case reports with no robust evidence supporting their use in CEP.

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