Pulmonary Eosinophilic Granuloma: Report of a Case

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Pulmonary eosinophilic granuloma was established as a clinical entity by Farinacci, Jeffrey and Lackey in 1951.1 There have been approximately 45 cases reported with only involvement of the lungs, and in the past ten years, this diagnosis has been acceptable as an established pathologic entity by both the pathologist and the radiologist. This case report reveals that the establishment of the diagnosis of the rare pulmonary eosinophilic granuloma must occasionally be viewed with suspicion until most of common forms of pulmonary disease have been carefully considered. Establishment of a histologic diagnosis on a diffuse pulmonary infiltration is not always the complete permanent answer to the diagnostic problem.

Case Report
A 52-year-old married white man of North Dakota. There is no remarkable history of any previous illness and he had no symptom referable to any possible pulmonary disease prior to his first admission to Firland Sanatorium. This admission resulted from a mobile unit x-ray film which showed fairly extensive bilateral pulmonary infiltration. During his first admission, from March 21, 1955 to May 20, 1955, he had many investigations to determine the etiology of his bilateral pulmonary disease. These investigations finally terminated in a lung biopsy on May 5, 1955. The biopsy material was arbitrarily taken from the left lingula and the slide was sent to the Armed Forces Institute of Pathology in Washington, D.C., where a diagnosis of eosinophilic granuloma of the lung was made. Without any specific treatment, considerable clearing of his pulmonary disease was noted and he did not develop subsequently any symptoms referable to his eosinophilic granuloma of the lung in any other organ of his body. He returned to his work in Vancouver, Washington.

In April of 1957, during the course of a routine physical examination at Kaiser Hospital, a chest x-ray film was taken which showed an infiltration in the left mid-lung field. This infiltrate extended off the hilum between the third and fourth anterior interspaces. Physical examination showed him to be a healthy cooperative man in no acute distress. He had a well healed scar at the site of his previous exploratory thoracotomy. Minimal dullness in the

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mid left lung field on auscultation and occasional coarse rales could be heard. No other gross abnormalities could be detected on the remainder of the physical examination. Bronchoscopy done at the hospital was essentially negative. Left scalene node biopsy demonstrated normal lymphoid tissue. Sputum examinations done over a period of time revealed atypical acid-fast bacilli on smear and culture. Subsequent chest x-ray films May 1, 1957 and May 19, 1957 showed a diffuse pulmonary infiltration on the left lung. The pulmonary infiltrate remained constant and increased in size.

The patient returned to Firland Sanatorium again, at which time the bronchoscopic examination was repeated and was negative. Sputum tests for acid-fast bacilli were subsequently negative. The area of infiltration at the base of the left upper lobe remained prominent and increased in size. At a full staff conference at Firland Sanatorium, it was recommended, after considerable differences of opinion had been expressed, that an exploratory thoracotomy should be done. Those opposed to this decision were of the opinion that the man had either tuberculosis or pulmonary eosinophilic granuloma, both of which could explain the progression of the lesion.

Left thoracotomy was done in December, 1957 and he was found to have an oat-cell carcinoma. Tumor involved most of the left upper lobe and there were multiple implants over the pericardium and mediastinum, inoperable from the viewpoint of doing any definitive surgery. Pathologic specimen obtained on the original biopsy of left lingula of the lung was reviewed by the Armed Forces Institute of Pathology and confirmed that the nodules noted approximately 2 cm. in diameter and scattered throughout the entire lung were characteristic of eosinophilic granuloma. Microscopically the nodules consisted of histiocytes and eosinophils, the histiocytes containing brown pigment. There was fibrosis about the nodules and the bronchial wall was infiltrated with eosinophils, polymorphonuclear leukocytes, and small round cells. Occasional areas of non-caseous necrosis with lymphocytes and giant cells were also noted in some of the nodules. This was quite compatible with the histologic picture presented by Auld in 1957.

Waiting for spontaneous remission is the treatment of choice in eosinophilic granuloma of the lung. This case illustrates that this policy may carry considerable risk.

References

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