Recurrent Cavitary Nodules Secondary to Hodgkin's Disease*

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A patient with nodular sclerosing Hodgkin's disease had at least three episodes of lung involvement consisting of an infiltrate on one occasion and multiple cavitating nodules on the other two. The cytologic and histologic studies of the lung specimens disclosed the presence of Reed-Sternberg cells on each occasion without any evidence for infection. This represents the first time in which recurrent cavitating nodules have been reported with Hodgkin's disease.

The most common intrathoracic manifestation of Hodgkin's disease is tracheobronchial and mediastinal node involvement. Pulmonary parenchymal involvement, usually in association with mediastinal adenopathy, has been reported to occur in 11 to 40 percent of cases, although it has been observed in over 50 percent of cases in necropsy series. Central necrosis with cavitation has not been found in any organ system involved with Hodgkin's disease except the lung. To date, there have only been 53 reported cases in the literature of lung cavitation due to Hodgkin's disease.* We present a case with recurrent cavitation due solely to Hodgkin's disease, a finding not previously reported.

CASE REPORT

A 28-year-old woman was admitted in February of 1980 with weight loss, generalized pruritus and lymphadenopathy. She was diagnosed as having nodular sclerosing Hodgkin's disease, stage IVB. In addition, she was also found to have pulmonary tuberculosis. The patient was given ten courses of methotrexate, vincristine (Oncovin), procarbazine, and prednisone (MOPP), as well as antituberculosis treatment. In 1982, recurrent supravacular and mediastinal adenopathy necessitated treatment again with MOPP, followed by six courses of doxorubicin (Adriamycin), bleomycin, vinblastine (Velban), DTIC, and three courses of vinblastine, prednisone, cyclophosphamide (Cytoxan), and procarbazine. She also received mediastinal and supravacular irradiation. In November of 1983 while on a course of CCNU, Velban, and bleomycin (CVB), a chest x-ray examination revealed a right sided infiltrate. Bronchoscopic examination was performed. Cytology of the bronchial washing revealed the presence of Reed-Sternberg cells. All studies were negative for bacteria, mycobacteria, and fungi. She was continued on CVB with clearing of the infiltrate. In October of 1984, she presented with fever and chills of two-weeks' duration. Chest x-ray examination revealed multiple cavitating nodules (Fig 1a). Bronchoscopic studies, as well as fine needle aspiration, again revealed Reed-Sternberg cells. Another course of CVB was given with improvement in her clinical and x-ray findings. Recurrent symptoms and cavitary nodules prompted readmission in November of 1985 (Fig 1b). On this occasion, all of the lesser invasive studies were nondiagnostic. An open lung biopsy was performed which disclosed Hodgkin's disease involvement of the lung with negative studies for bacteria, acid-fast bacilli, and fungi. Following this, she became septic and expired. No post-mortem examination was performed.

DISCUSSION

Pulmonary parenchymal involvement with Hodgkin's disease usually occurs secondary to spread from mediastinal node involvement. The majority of these patients have nodular sclerosing type of Hodgkin's disease and the roentgenographic pattern is one of infiltration.* Parenchymal involvement without nodal involvement occurs less commonly and morphologic patterns include: nodules, which can be solitary, multiple, millitary, and cavitary; pulmonary infiltrates; lymphangitic; endobronchial; subpleural and pleural.* Our case is unusual in that mediastinal node involvement was present only on the first two admissions and not present when the recurrent cavitation occurred. If this patient did not have previously diagnosed Hodgkin's disease, the differential would have included connective tissue disorders such as rheumatoid arthritis and Wegener's granulomatosis, as well as infectious etiologies. However, with the diagnosis already established, the differential was between the primary disorder and infection. The recurrence of the

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nodules led us to strongly believe infection was present, since recurrent cavitation had not been previously reported with Hodgkin's disease. This concern led us to perform an open lung biopsy when all lesser invasive studies were nondiagnostic.

Although recurrent cavitation can occur in Hodgkin's disease, it is important that every effort be made to exclude an infectious etiology before embarking on a course of therapy.

REFERENCES

Severe Hypoxemia in Farmer's Lung Disease with Normal Findings on Chest Roentgenogram*

Maqbool Arshad, M.D.;† Sheldon R. Braun, M.D., F.C.C.P.;‡ and E. V. Sunderrajan, M.D., F.C.C.P.‡

A 33-year-old woman farmer developed an acute episode of fever, cough, and shaking chills with persistent shortness of breath. Her PaO₂ was 51 with a restrictive pattern on pulmonary function. Her diffusion capacity was 36 percent of predicted. In spite of these abnormalities, she always had normal chest roentgenographic findings. Further studies, including a lung biopsy, led to the diagnosis of farmer's lung disease.

Farmer's lung disease, a type of hypersensitivity pneumonitis, is characterized by acute febrile episodes that appear several hours after exposure to moldy material containing thermophilic Actinomyces or other antigens. The severity of each febrile reaction depends on the individual patient's sensitivity and extent of exposure. The roentgenographic appearance of the acute episode varies from reticular opacities to interstitial infiltrates and patchy pneumonitis. Pulmonary function tests demonstrate decrease in lung volume and diffusion capacity without significant airway obstruction. Lung biopsies in these patients show noncaseating granulomas with significant inflammatory changes. While chest roentgenographic findings can become normal later in the course of farmer's lung disease, the occurrence of acute dyspnea and hypoxemia with diffusion impairment and completely normal chest roentgenographic findings is very unusual.

CASE REPORT

A 33-year-old woman farmer experienced sudden onset of shaking chills, fever and cough 13 days prior to admission to the University Hospital. Result of physical examination by her physician a day after symptoms appeared was normal. Persistent cough, headaches, as well as increasing shortness of breath led to a return visit to her physician three days later. The chest roentgenographic findings were normal and she was begun on therapy with doxycycline. Because of

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Table 1—Physiologic Evaluation during Acute Episode

Figure 1. Admission chest roentgenogram.

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