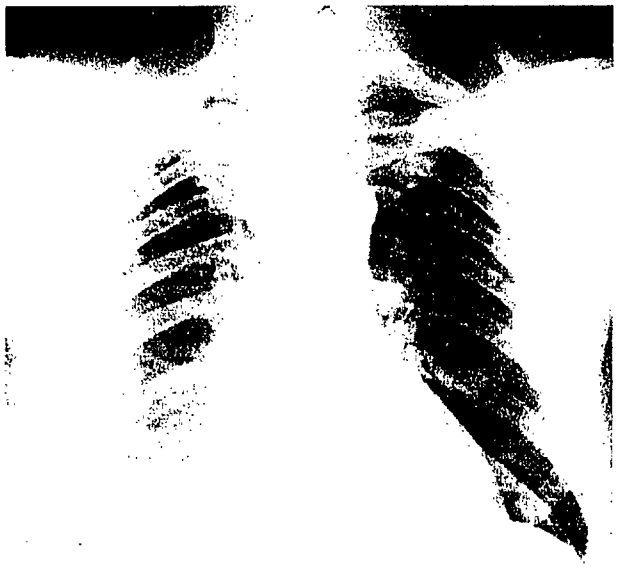
ly, extensive destruction of lung tissue leads to respiratory and cardiac failure.

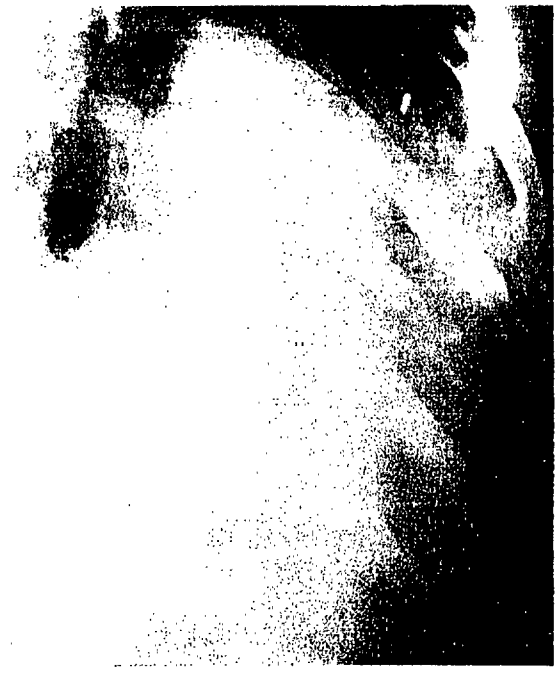
It is well known that pleural abnormalities are commonly found in asbestosis. Most experts believe that they are associated only with advanced pulmonary disease; others describe them as secondary complications or even as coincidental lesions not directly connected with asbestos inhalation.[2]

In contrast to these observations we have been able to find a small number of patients with asbestosis who present primarily the clinical picture of pleurisy in the absence of any significant pulmonary disease or respiratory dysfunction.



1. Benign pleural asbestosis (case 2).

2. Malignant mesothelioma of pleura producing rib destruction. Note pleural calcifications.



Report of Cases

CASE 1.[3]—In September 1960, a 54-year-old insulator in contact with asbestos for 15 years suffered from a left-sided pleurisy. His chest x-ray revealed a small effusion. Because he had little discomfort, no thoracentesis was done, and he was treated conservatively.

However, in March 1961, a similar attack occurred on the right side. At this time, chest pain, cough, malaise and fever were quite severe, and a friction rub was noted. A thoracentesis yielded 500 cc serous fluid with 4% protein and many lymphocytes; however, neither malignant cells nor microorganisms were encountered. The course was prolonged, and finally an exploratory thoracotomy was done. The visceral pleura was as thick as an orange peel, and the pleural cavity was partly obliterated. Fibrous and hyaline plaques covered the parietal pleura. The pathologist described large deposits of dense connective tissue in the pleura with inflammatory cell infiltration. A lung section revealed thickening of the alveolar walls with macrophages and asbestos bodies.

CASE 2.—A 58-year-old white male, working with asbestos for 12 years was seen in consultation because of right-sided pleural effusion (Fig 1). The disease had been present for three weeks and had caused chest pain, fever, cough, and dyspnea. Asbestos bodies in the sputum, a moderate leukocytosis, a fast sedimentation rate, and a positive latex test for rheumatoid arthritis were the only abnormal laboratory findings. Tests for tuberculosis and fungi gave negative results. A total of 30 cc of a blood-tinged exudate was removed by thoracentesis. Two weeks later a thoracotomy, done because of persistent symptoms, revealed pleural plaques and adhesions. A lung specimen, taken in addition to the pleural biopsy, showed asbestos bodies. After decortication and partial pleurectomy, the patient became asymptomatic, and results of his chest x-ray were normal. Eight months later the patient was seen again because of fever and chest pain due to a left-sided pleural effusion. He was treated symptomatically and had completely recovered one month later.

Two cases of malignant mesothelioma, obviously preceded by benign pleurisy, have been observed.

CASE 3.—A 57-year-old refinery foreman,[6] exposed to asbestos for a decade, was treated intermittently 12 years for a severe pain in the hemithorax on the left. He had no abnormal findings. One day, a routine chest x-ray revealed a spontaneous pneumothorax with a small pleural effusion. Because of persistent symptoms a thoracotomy was done which showed pleural thickening, plaques, and adhesions. The correct diagnosis was not established until a year later when, during a barium x-ray of the colon, osteolytic lesions were discovered in the left lower side of the thorax. At this time, malignant mesothelioma was found in the bone specimen. The patient obviously had suffered from benign pleural asbestosis for about 12 years before the development of his malignancy. This case was unusual inasmuch as a spontaneous pneumothorax was the first objective evidence of disease. This complication is rare but has been reported in association with benign[7] as well as malignant asbestosis.

CASE 4.—In 1959, a 58-year-old foreman[8] who had supervised asbestos insulation for three decades was found to have a malignant mesothelioma of the pleura on the left side. Ten years earlier he had been hospitalized for bilateral pleural effusions. The diagnosis of tuberculosis was entertained at this time but could never be proved. He had been under constant medical supervision because of the appearance of streak-like pleural calcification following his attack of pleurisy (Fig 2). His autopsy showed benign asbestosis in all portions of the pleura not involved by the malignancy. Similar case histories have been found in the literature dealing with asbestos and mesothelioma.[4]