

PREAMBLE:

Autopsy is performed by me, Hugh F. Frame, M.D., in the preparation room of the French Funeral Home in Gouverneur, New York at 9:30 A.M. on September 2, 1994. The autopsy is authorized by Dorothy C. McGuinness, the wife of the deceased and this authorization limits the examination to the lung or chest area only. I am assisted at the autopsy by two assistants of Mr. French who identify the body to me as that of Mr. Thomas McGuinness.

EXTERNAL APPEARANCES:

The body is that of an elderly white male who appears well developed and well nourished. No evidence of great loss of weight is seen. Numbers of ecchymoses are seen within both antecubital fossae and within the skin of both forearms some in conjunction with needle puncture marks. The body has been embalmed via the right carotid vessels.

INTERNAL APPEARANCES:

Widespread, dense adhesions are present between the pleural layers throughout the left thoracic cavity. The visceral and parietal pleural layers on this side are firmly adherent throughout with obliteration of the pleural cavity. No pockets of fluid or pus are found between the layers. The adhesions are so dense that sharp dissection is required in many places for removal of the left lung from the cavity. In many places, therefore, where sharp dissection is required, thin layers of lung tissue or visceral pleura are left firmly adherent to the chest wall and dome of the diaphragm so that it is not possible to inspect the inner layer of the thoracic wall for pleural plaques. In areas where the two pleural layers can be separated the pleurae are seen to be thickened and opaque and white in appearance and are thickened up to 1 or 2 mm. in thickness.

Pleural adhesions are less widespread within the right thoracic cavity and occur only over the posterior aspect of the right upper lobe and throughout the apex of the right upper lobe. In these regions the adhesions are dense and difficult to separate but they are separated without sharp dissection. At other levels the pleurae on this side are smooth and glistening. No acute pleural reaction is seen in the right thoracic cavity.

The trachea and bronchi are of normal dimensions and are lined by smooth, glistening mucosae. No tumors can be demonstrated arising from these structures or from the primary bronchi and bronchi within the hila of the lungs. Both lungs are expanded and no areas of collapse of lung tissue can be seen. Both lungs show diffuse emphysematous changes in that throughout the lung tissues are seen numerous tiny dilated air sacs which measure between 1 and 3 mm. in diameter. No large emphysematous bullae are found. No fibrosis of the lungs is apparent either in the form of fibrous nodules or longer fibrous bands and no old granulomata or calcified nodules are demonstrated within the lung tissues. No tumors are discovered. Within the apex of the

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left lower lobe, however, an irregular nodule of solidification of the lung tissues is found. This irregular nodule measures up to 2.8 cm. in greatest dimension and is firm or hard to palpation. In the solidified area the lung tissues are gray or black in appearance and a central area of cavitation is seen on sectioning the nodule. The irregular cavity measures up to 1.5 cm. in diameter and contains a small quantity of gray or black fluid. No other such lesions are found within the lungs and no areas of bronchopneumonic consolidation are palpable. The lung tissues are grayish red in color and show a moderate anthracotic mottling in most areas. Pulmonary congestion and pulmonary edema are not noticeable but this is an embalmed body.

A prominent feature in the examination of the lungs and bronchi is the presence of numbers of enlarged calcified lymph nodes within the tracheo-bronchial groups. The largest of these nodes measures 3 x 2 x 1.5 cm. in diameter and the smallest which are seen enclosed within the hila of the lungs on both sides measure up to 8 mm. in diameter. Most of these enlarged lymph nodes are completely calcified and hard or rock-like to palpation. The larger nodes will not yield to sectioning by any instrument. Numbers of the smaller lymph nodes can be sectioned and show partial or complete replacement by crumbly yellowish calcified material. No caseation or suppuration is discovered within the nodes which can be sectioned and no tumor is apparent.

The heart is not examined in detail. The pericardial sac contains approximately 15 ml. of clear, pale yellow fluid and the pericardial layers appear free from disease. Myocardial hypertrophy is not prominent within either ventricle.

MICROSCOPIC APPEARANCES

Both lungs show diffuse, vesicular emphysematous changes. At some levels little fibrosis can be seen but, at other points irregular islands of scarring or fibrosis can be seen. The dilated air sacs vary in size and some, particularly in association with the fibrosed areas, are quite large with attenuated walls. In some instances the walls of the distended alveoli have ruptured. The solid nodule found within the apex of the left lower lobe is made up of dense fibrous connective tissue which alternates with islands and layers of closely packed macrophages. The fibrous tissue seems to vary in age from place to place and, at some points, the fibrous tissue stains brightly eosinophilic and is relatively acellular. The closely packed macrophages are dusted with grayish or pale brown pigment which, under polarized light, is seen to be doubly refractile and made up of tiny spots or small needle-shaped bodies. The fibrous nodule also shows irregular foci of black or gray pigment which is not doubly refractile. Rare small collections of lymphocytes are scattered throughout the fibrous nodule. The smaller fibrous scars seen elsewhere in the lung sections show similar collections of macrophages containing doubly refractile material and small deposits of blackish pigment. No areas of caseation are seen in the fibrosed areas and multinucleated giant cells are not prominent. No tumor is made out in these lung sections. So-called ferruginous or asbestos bodies are easily found within the lung sections and can be seen singly or in clusters within alveoli in many places and also within the interstitial framework of the lungs at some points. The visceral pleural layers, where seen, show well marked fibrous thickening.

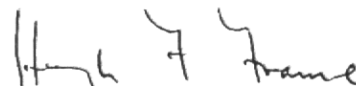
Sections are taken from lymph nodes and also the large calcified lymph nodes are sectioned and decalcified. The nodes show replacement or partial

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replacement by rounded masses of acellular eosinophilic material throughout which, in some sections, can be seen numbers of multinucleated giant cells. Pigmentation of these nodes is not prominent and no doubly refractile material can be demonstrated within the nodes. Within the large, calcified nodes the nodes are completely replaced by acellular eosinophilic material which has a whorled appearance at some levels and which resembles old, partially calcified caseation. No active granulomata are demonstrated within the sections. The fibrous nodule within the apex of left lower lobe does not appear to be granulomatous in origin.

AUTOPSY FINDINGS:

1. Pleural adhesions, marked, left thoracic cavity.
2. Diffuse pleural fibrosis, mainly left thoracic cavity.
3. Emphysema with pulmonary fibrosis.
4. Mixed dust fibrosis with asbestosis.



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Pathologist

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