

FILE NAME: RT Vanderbilt (RTV)

DATE: 1995 Aug 4

DOC#: RTV043

DOCUMENT DESCRIPTION: Pathologist Lung Description - Arthur House -
"Pleural Plaques...honey-combed appearance...some greenish-grey fluid
exuded...multiple pulmonary embuli"

HOUSE, ARTHUR

AG-95-04

GROSS DESCRIPTION

The body is that of a thin, well-developed, elderly-appearing white male. The body was opened with a Y-shaped incision and the lungs were removed. Both lungs were very firm and the external surface had a slight nodular appearance. There were some pleural plaques noted on the diaphragmatic surface of the right and left lungs along with some plaques noted on the visceral surface of the right and left lung. Upon sectioning, the lungs had a slight honey-combed appearance. There exuded some greenish-gray, purulent fluid from some areas of the lung upon sectioning. There were also multiple pulmonary emboli noted within the blood vessels.

MICROSCOPIC DESCRIPTION

Sections of the lung showed a marked neutrophilic infiltration within some of the alveoli (acute bronchopneumonia). There is some fibrin deposition within some of the alveoli. There are also some histiocytes and multinucleated giant cells. There are rare ferruginous bodies noted. There are numerous doubly refractile crystals noted on polarization. These are noted free within the alveoli, within some histiocytes, within some multinucleated giant cells, within some of the rare ferruginous bodies, and within the fibrous tissue between the alveoli. Most of these refractile particles are very small and splinter-shaped in appearance. There are also a few larger, somewhat spherical-shaped, doubly refractile particles. The ferruginous bodies are most noted in block #5. There are some areas of fibrosis. Within these areas, there are some macrophages containing some brownish-black, granular pigment. Focally, there are some oval-shaped, eosinophilic, amorphous bodies. Some of these appear to be surrounded by histiocytes. There are large areas of fibrosis. There are relatively acellular, hyalinized, fibrous plaques on the surface of the lungs. There is rupture and dilation of some of the alveoli. Some of these foci are adjacent to the fibrous areas. Within some of the blood vessels, there are layered fibrin and red blood cells (pulmonary emboli). There are rare food particles noted within some of the alveoli with acute inflammation, indicating aspiration pneumonia. Special stains for Acid Fast and fungal organisms are negative.

HOUSE, ARTHUR

AG-95-04

FINAL SUMMARY

Results of the autopsy Grossly revealed an increased firmness of the lung along with visceral and parietal pleural plaques. Microscopically, there was foci of fibrosis within the lungs along with adjacent expansion of alveoli. There was marked, acute inflammation within numerous alveoli. The presence of rare food particles would indicate an aspiration pneumonia. There were also multiple pulmonary emboli present. There were numerous doubly refractile splinter-shaped crystals noted on polarization. There were also some giant cells present. These could have been present due to the aspiration pneumonia. They also could be present because of the foreign crystals present. Tuberculosis can also not be completely excluded. However, Acid Fast stains were negative and the foci do not have the classic caseating tuberculoid appearance. Ferruginous bodies are seen with mineral deposition within the lungs. They are most common with cases of asbestosis. However, they can be seen in exposure to silicates. The presence of refractile crystals within the ferruginous bodies would suggest this as the possibility. The exact etiology of the mineral fibers can not be determined without X-rays, refraction studies and/or electron microscopy. Based on the results of the autopsy, it is concurred that the acute agonal cause of death was due to aspiration pneumonia and multiple pulmonary emboli. The patient was predisposed to this condition due to pneumoconiosis with numerous doubly refractile mineral fibers.