MCQ Answer: Hypersensitivity Pneumonitis

MCQ Explanation: Hypersensitivity Pneumonitis occurs following exposure to an organic antigen and results in cough, shortness of breath, and sometimes flu-like symptoms that come and go with the exposure. This patient does not appear to have any recent exposures, such as birds, mold, water aerosols, or hay.

COPD is strongly associated with smoking. His constitutional symptoms, weight loss, and progressive dyspnea are suggestive of malignancy, particularly in the setting of smoking. As someone in the construction industry, he has likely had some degree of exposure to pneumoconioses-inducing asbestos and silica, which tend to present years after exposure with slow onset of shortness of breath.

Answer: Lymphangioleiomyomatosis, Metastatic Malignancy, and Pulmonary Langerhans' Cell Histiocytosis

MCQ Explanation: Lymphangioleiomyomatosis is a rare cystic lung disease that is almost exclusively found in women. Pulmonary Langerhans’ cell histiocytosis is a smoking-related disease associated with upper lobe predominant, thin-walled cysts and accompanying nodules. Metastatic malignancy can present as cystic lesions, particularly with tumors of epithelial origin.

Asbestosis is associated with peripheral- and basal-predominant septal thickening, diffuse pleural thickening, and calcified pleural plaques. Cysts are not a feature of asbestosis. COPD is associated with air trapping and emphysematous changes of the lungs without cyst formation. Bullae, air spaces in the lung greater than 1 cm in diameter, can be seen and should not be confused with cysts. Idiopathic pulmonary fibrosis is characterized by bibasilar, subpleural reticular opacities, honeycombing, and traction bronchiectasis without cysts or nodules. Silicosis presents with bilateral upper-lobe predominant calcified nodules and calcified hilar and mediastinal lymphadenopathy, but without cysts.

His clinical picture remained highly concerning for malignancy and further work-up was pursued. CT-guided and transbronchial lung biopsies revealed mucinous adenocarcinoma. Immunohistochemical staining showed loss of DPC4 expression and serum CA19-9 was elevated, suggesting primary pancreatic adenocarcinoma. Abdominal CT showed a pancreatic mass, with biopsy revealing adenocarcinoma. The patient was diagnosed with pancreatic adenocarcinoma metastatic to the lung and referred for initiation of chemotherapy.

References: