VII. Lung

The Clinical Evaluation of Lung Scan and Combining Selective Angiography with ^{131}IMAA Injection Through Bronchial Artery

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It is apparent that the vascular system of lung is supplied by pulmonary artery and bronchial artery. Lung scans performed with intravenously injected ^{131}IMAA show the relative distribution of pulmonary blood flow, and may be helpful in a diagnosis of obstructive pulmonary artery, pulmonary embolism and infarct; a lack of pulmonary artery circulation. However, it is difficult to differentiate the localized lesion, inflammation and impairment of blood flow with lung scan because they cause only a similar pattern of regional ischemia.

This presentation concerns with bronchial arteriography and ^{131}IMAA injected through the bronchial artery (Angioscanography). 250 μCi of IMAA is injected through the bronchial artery when selective bronchial arteriography is undertaken by Seldinger's percutaneous method, and A.S.G. is performed two hours, one, three and five days after that. The results of findings in 36 cases undertaken bronchial arteriography and A.S.G. from 158 cases of lung scans are discussed.

Primary carcinoma of lung	8	cases
metastatic carcinoma of lung	6	
intrapulmonary teratom	1	
tuberculosis of lung	6	
carcinoma of esophagus	2	
carcinoma of breast	4	
suppurative lung disease	2	
fibrosis of lung	1	
obstructive pulmonary artery	1	
unknoun	5	

The primary carcinoma shows positive scanning fitted with the tumor for three days, but the advanced primary and metastatic carcinoma shows defect on A.S.G. fitted with the tumor at two hours. This is a reason that secondary changes which involve necrosis, tumor invasion into the bronchial artery, and inflammatory process of surrounding tissue may be produced, and the histology of tumor is various.

A.S.G. shows complete defect in teratom, slightly positive scanning on a partial lung scan which is recognied in inflammatory process because of bronchopulmonary anastomosis particularly in tuberculosis, while it shows almost completely lung scanning for severe bronchopulmonary anastomosis in obstructive pulmonary artery.

A.S.G. of bronchial artery is an advantageous method for making a diagnosis of malignant lung disease. Also the bronchial arterography should be done as a kind of routine works taking careful of its application and spinal cord damage because spinal arteries branched from intercostobronchial trunk receive contrast material and some symptoms of neurotoxicity are encountered.