

Possible clinical diagnosis

Case 352

All but suspicious BALT related lymphoma most

【Progress】

He is under clinical observation though he has no respiratory symptoms.

【Discussion】

When multiple pulmonary nodules with ill-defined margin are encountered on chest CT, what differential diseases are listed for imaging diagnosis? How imaging diagnosis should be conducted? On difficult case to make an exact diagnosis it might not be good to name direct disease. Instead, it might be better to return disease backgrounds. Namely, the disease belongs to four categories: tumor, inflammation, allergy, and vascular (1, 2).

For pulmonary tumor of multiple ill-defined nodules, metastatic tumor and primary lung cancer of mucinous infiltrative cancer are first listed. Metastatic tumor from gastrointestinal tract either pre-chemotherapy or post-chemotherapy are possible to make metastasis to lung with this form. Mucinous infiltrative adenocarcinoma probably arisen from Goblet cells whose secrete mucin with intrapulmonary metastases are to possibly form ill-defined nodules with air bronchogram. Pulmonary lymphoma or BALT (bronchus associated lymphoid tissue) related lymphoma emerges as ill-defined nodule with air bronchogram (1).

For inflammatory nodules, bacterial, mycobacterium (tuberculous or non-tuberculous) and fungus infections are listed. Bacterial infection is usually associated with elevation of white blood cell count. Multiple pulmonary abscess might be possible. Mycobacterium infection either tuberculous or non-tuberculous occur in dominant lobes; pulmonary Tbc occur in apical and/or upper lobe, while NTM occur in middle lobe and/or left lingulae lobe. Fungus infection such as cryptococcus or aspergillosis is possible to form this type of nodules (1, 3). Laboratory test of β -d-Glucan assists diagnosis of fungus infection.

For allergic nodules, type IV allergy is defined delayed allergy response with immune cells forming granuloma. Sarcoidosis whose immune reaction response to unknown antigen, forms as multiple ill-defined granulomas. Multiple granulomatous polyangiitis whose immune reaction to neutrophil cytoplasm known as anti-neutrophil cytoplasmic antibodies (ANCA) related vasculitis (2, 4-6).

As vasculitis nodules, septic embolism is listed. Septic embolism originated from proliferation of bacteria at tricuspid valve fly and reach pulmonary capillaries and create inflammatory nodules and infarction that sometimes cause to make cavity in nodules (6).

In conclusion, when pulmonary multiple ill-defined nodules are encountered on chest CT, Differential diagnosis should be initiated from Category but not from direct diseases although the correct diagnosis is yet to be clarified in our case.

【Summary】

We presented a fifty-nine-year-old male presented in our hospital for follow-up observation of his cardiac function. Chest CT depicted pulmonary multiple nodules with ill-defined margin, despite of no pulmonary symptoms. It is borne in mind that when unpredictable nodules are depicted on CT, differential diagnosis should be listed not from direct names of diseases but from four or five categories: congenital, inflammation, tumor, allergy, and vascular. In this situation, for tumor, pulmonary lymphoma, mucinous infiltrative cancer are listed; for inflammation, fungus infections are listed; for allergy, sarcoidosis and granulomatous polyangiitis are listed: for vascular, septic emboli is listed.

【References】

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