115 年奇美醫院胸腔內科臨床病例討論會

1 時間：115 年 09 月 29 日 PM 4:00-5:00
2 課程活動題目:Granulomatous pneumonitis 影像暨病理表現
3 主講人：柯獻欽
4 地點： 奇美醫學中心 10 樓空橋討論室
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6 摘要：

Introduction

The interstitial lung disease can have a variety of appearances: a reticulo-nodular pattern is the most common and is typically bilateral and symmetric. An acinar or "alveolar" pattern with small indistinct nodular opacities can be seen. The densities can be discrete or coalesce producing areas of apparent parenchymal consolidation with air bronchograms. The infiltrates can be peripheral and mimic pulmonary infiltrates associated with eosinophilia (1). Despite the appearance of airspace disease, the abnormality is still the result of interstitial disease. Multiple nodules have also been described, particularly in young black females and are usually very responsive to steroid therapy. Pleural effusions are RARE (0-5%), can be uni- or bilateral, are usually small to moderate in size, and are usually straw colored exudates with a lymphocyte predominance (2). A negative gallium scan is a reliable indicator of clinical inactivity.

Chest radiographic findings:

Plain film CXR abnormalities are found in over 90% of patients with sarcoid at sometime during the course of their disease (1). Bilateral hilar adenopathy is found in 95% of cases, right paratracheal adenopathy in 70%, and AP window adenopathy in 30-50%. Subcarinal nodes can also be involved in up to 25% of patients. Lymph node calcifications are found in 3-20% (2). Calcification can be amorphous, popcorn-like, or uncommonly egg-shell in appearance (5%). Calcification of affected nodes is related to duration of disease. Calcification is seen in 3% of cases after 5 years, and in 20% of cases after 10 years. RARE nodal findings include isolated mediastinal adenopathy (anterior, middle, or least commonly- posterior mediastinal adenopathy), or isolated unilateral hilar adenopathy (1-3%) (3). Older patients are more likely to have atypical patterns of adenopathy.

Computed tomographic findings:

CT is more sensitive than CXR in the detection of adenopathy and parenchymal lung disease. Mediastinal adenopathy is easily demonstrated. HRCT is used to evaluate for parenchymal lung disease. Small 2-3 mm, well circumscribed pulmonary nodules are commonly seen. The nodules are seen within the lung parenchyma, along the pleural surfaces, and along the fissures. There can be nodular thickening of the bronchial walls (when identified, this is associated with a very high diagnostic success rate for transbronchial biopsy (80-95%) [3]), along vessels, and along the fissures. These findings are related to the presence of non-caseating granulomas which are distributed

within the bronchial mucosa, and along the lymphatics in the bronchovascular bundles, interlobular septa, and subpleural regions. Subpleural nodules (3-10mm in size) are found in 60-80% of cases. Large nodules greater than 1 cm in diameter occur as a result of coalescence of small nodules and are often surrounded by many tiny satellite nodules. Other findings include ill-defined centrilobular nodules which may coalesce.

Discussion

Nodular or irregular (occasionally smooth) thickening of the perivascular interstitium is also particularly common in sarcoid. The distribution of perivascular interstitial thickening may be patchy. Nodular or irregular thickening of the interlobular septae can be seen. Parenchymal bands can be seen in patients with sarcoid. Endobronchial granulomata in patients with sarcoid may rarely (1% of cases) result in significant airway narrowing. Areas of ground glass attenuation can also be identified and reflect the presence of microscopic interstitial granulomas, rather than alveolitis. Air trapping at the level of the secondary lobules has also been described and is felt to be related to narrowing of the small airways as a result of peribronchiolar granulomas. The ground-glass opacities commonly have a finely stippled appearance due to the presence of tiny nodules. Air trapping will appear as areas of decreased attenuation on expiratory images. Parenchymal opacities with air bronchograms may be seen in sacoid (alveolar sarcoid), but are uncommon. The extent of abnormalities on CT unfortunately correlate poorly with the patients level of functional impairment. In late stage disease, severe fibrosis results in architectural distortion, traction bronchiectasis, and fibrocavitary changes which is difficult to distinguish from other causes of end-stage lung disease.