Nodular pulmonary sarcoidosis presenting as acute chest pain

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DESCRIPTION

A 20-year-old African-American woman presented to the emergency room for the evaluation of a 1-day history of chest pain radiating to the left shoulder. She reported having similar symptoms 6 months prior that had resolved spontaneously. A chest radiograph performed at that time was within normal limits. She denied any flu-like illness, trauma or any associated shortness of breath. She also denied any fever, chills, weight loss or haemoptysis. She is a non-smoker and denied any illicit drug use. Physical examination did not reveal any chest wall tenderness.

A complete blood count and comprehensive metabolic panel were normal. Antinuclear antibody was positive. Erythrocyte sedimentation rate 57 mm/h, C reactive protein 0.7 mg/dL and HIV 1–2 antibodies were non-reactive. Purified protein derivative and quantiferon test (interferon γ-release essay) were negative. ACE levels were within normal limits. A chest radiograph revealed a vague nodular opacity in the left lingula (figure 1). A CT scan of the chest (figure 2) confirmed the presence of multiple bilateral parenchymal nodules. An ultrasound biopsy of one of these masses (figure 3) was performed and subsequent histopathological examination demonstrated non-caseating granulomas with multinucleated giant cells (figure 4).

Typical radiographic findings in sarcoidosis include bilateral hilar lymphadenopathy often with right paratracheal lymph node involvement with or without parenchymal air space disease.1

Nodular pulmonary sarcoidosis is a rare atypical presentation of intrathoracic sarcoidosis characterised by multiple discrete nodular opacities.

Most cases are asymptomatic or incidentally found on chest X-ray. Some patients may present with cough or shortness of breath or less commonly as acute chest pain as in our patient. Differential diagnosis is expansive and includes metastatic disease, primary malignancy of the lung, granulomatosis with polyangiitis, fungal infections and tuberculosis. Diagnosis is confirmed by biopsy. Nodular pulmonary sarcoidosis carries a favourable diagnosis with complete radiographic resolution seen in most of the cases,2 although pulmonary function tests may demonstrate restrictive disease which may remain unchanged or worsen despite clearance of infiltrates.3

Figure 1. Chest radiograph showing a vague rounded density in the left lingula (arrow).

Figure 2. CT scan of the chest showing multiple non-calcified nodular opacities with no hilar lymph node enlargement (arrows).

Figure 3. Coronal view of a CT scan of the chest showing a larger left pleural nodular mass (arrow).
Learning points

▸ Typical radiographic findings in sarcoidosis include bilateral hilar lymphadenopathy with possible parenchymal involvement.
▸ Nodular pulmonary sarcoidosis represents a rare atypical form of intrathoracic sarcoidosis characterised by multiple nodular opacities.
▸ Nodular pulmonary sarcoidosis may present as acute chest pain.
▸ Diagnosis is confirmed by biopsy of the lesions.

REFERENCES