Multiple Endobronchial Mass Lesions Due to Sarcoidosis

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SUMMARY
Sarcoidosis is a systemic granulomatous disease that primarily affects the lung and lymphatic systems of the body. The lungs are affected in over 90% of sarcoid patients. Although paranchymal lung disease is more common, the airways may also be involved. Bronchial mucosa is often affected in sarcoidosis, but endobronchial mass lesions are very rare. We present a case with multiple endobronchial mass lesions due to sarcoidosis.

Key Words: Sarcoidosis, endobronchial mass.

ÖZET
Sarkoidoz Nedenli Multipl Endobronşiyal Kitle Lezyonlar

Anahtar Kelimeler: Sarkoidoz, endobronşiyal lezyon.

Sarcoidosis is a systemic granulomatous disease that primarily affects the lung and lymphatic systems of the body. The lungs are affected in over 90% of sarcoid patients. Although paranchymal lung disease is more common, the airways may also be involved. Bronchial mucosa is often affected in sarcoidosis, but endobronchial mass lesions are very rare (2). We present a case with multiple endobronchial mass lesions due to sarcoidosis.

CASE REPORT
A 55 year-old women admitted to our hospital with a few months history of chest pain, and...
purple macular lesions on the face and neck. Physical examination was normal except multiple macular purple lesions on the face and neck, and right supraclavicular lymphadenopathy. Complete blood count, urinalysis, blood biochemical investigations were all normal. Pulmonary function tests demonstrated mild obstructive ventilatory impairment. PaO₂ was 70 mmHg and PCO₂ was 43 mmHg. Chest X-ray revealed bilateral hilar and mediastinal enlargement. Thoracic high resolution computerized tomography showed multiple mediastinal and bilateral hilar lymphadenopathy. Tuberculin skin test was negative. Gallium 67 scanning demonstrated increased uptake in mediastinal and bilateral hilar regions. Biopsy of the skin lesion on the face was non-diagnostic. Histopathological examination of the right supraclavicular lymph node showed non-caseating granulomatous lymphadenitis and a few asteroid bodies within the cytoplasm of the multinucleated giant cells. Microbiological examination of the biopsy specimen was negative. Fiberoptic bronchoscopy was performed; main carina was enlarged and there were mass lesions in the right upper and middle lobe bronchi and in the apical segment bronchus of the left lower lobe (Figure 1). Mucosal biopsy specimens from these mass lesions and bronchoalveolar lavage (BAL) were taken. Examination of BAL fluid showed T lymphocytosis and CD4/CD8 ratio was 5. Mucosal biopsy specimens demonstrated non-caseating granulomatous inflammation.

DISCUSSION

Sarcoidosis is a multisystem disease of unknown etiology that predominantly affects the lungs and intrathoracic lymph nodes (1).

Flexible bronchoscopy (FB) is frequently used to obtain transbronchial biopsy of lung tissue or transbronchial needle aspiration of enlarged lymph nodes to confirm the clinical diagnosis. Historically, biopsies of scalene lymph nodes, mediastinoscopy or open biopsies were often performed to substantiate the diagnosis (2). The characteristic noncaseating granulomas are easily accessible to bronchoscopic diagnosis by either endobronchial or transbronchial lung biopsies. A characteristic endobronchial appearance may be encountered during FB that has classically been described as "cobblestoning" or "pebbly mural". These submucosal areas of early white nodules often demonstrate granulomas when biopsied. Other bronchoscopic descriptions have included normal mucosa with epithelial granulomas on endobronchial biopsy, localized mucosal erythema, plaques (infiltrative, raised or flat, white or yellow) and nodules (red or yellow, discrete, measuring 1-5 mm in size) (3-5). The diagnosis of sarcoidosis was established with histological examination of the biopsy specimens from lymph node and endobronchial mass lesions in our patient.

It remains unclear whether endobronchial involvement in sarcoidosis is a specific form of a disease or a sign of a generally increased disease burden in the lungs. In 62 patients recently diagnosed sarcoidosis; Bjørner et al. noted that the presence of epitheloid granulomas on endobronchial biopsy correlated with higher inflammatory activity in BAL fluid compared with those with negative biopsy specimens (3). In our patient CD4/CD8 ratio in BAL fluid was 5 and endobronchial lesions were masses.

Endobronchial involvement in sarcoidosis is not uncommon (3). The bronchoscopic appearance is variable ranging from normal mucosa to a typical "pebbly mural" pattern; but endobronchial mass lesion due to sarcoidosis is extremely rare (4).

Figure 1. Appearance of right upper lobe orifice.
We hereby propose that; although it is a rare occurrence endobronchial sarcoidosis must be thought in the differential diagnosis of endobronchial mass lesions.

REFERENCES


