Bilateral Massive Pleural Effusion—A Rare Presentation of Sarcoidosis

Sir,

A middle-aged lady presented to her physician with breathlessness on exertion, dry cough and weight loss. Histopathology of an enlarged right supraclavicular lymph node revealed necrotising granulomatous lymphadenitis. Hence with a diagnosis of tuberculosis adequate first line antituberculous therapy was given. As her symptoms worsened, Ciprofloxacin, Ethionamide and Kanamycin were added. These drugs were taken regularly for 13 months. Thereafter she discontinued all medications due to further worsening. Her chest radiograph showed bilateral interstitial shadows and small pleural effusions. Repeat right supraclavicular lymph node biopsy showed necrotising granulomas, and culture grew one colony of Mycobacterium tuberculosis. She was given Isoniazid, Rifampicin, Pyrazinamide, Sparfloxacin and Cycloserine. She still had no relief of symptoms despite good adherence to therapy for 11 months. She presented to us with worsening of breathlessness and dyspnoea at rest.

On examination, she was afebrile with tachypnea, tachycardia, central cyanosis, asterixis and bilateral pitting pedal oedema without elevation of JVP. She had three enlarged, firm, discrete, right supraclavicular lymph nodes. Chest examination revealed stony dullness to percussion over both lung bases with absent breath sounds over these areas. Rest of the physical examination was unremarkable.

Hemogram and blood biochemistry were normal. Mantoux test was negative. ABG showed pH-7.41; pCO₂ 52.2 mmHg; pO₂ 44.6 mmHg; HCO₃ 32.6 mEq/l and saturation of 80.3%. Chest radiograph showed bilateral pleural effusions. HRCT scans (Figure 1) revealed nodularity and marked thickening, predominantly along the central peribronchovascular interstitium. There was moderate bilateral pleural effusion. Subcardinal, paratracheal and anterior mediastinal nodes were enlarged, up to 12mm with some exhibiting areas of peripheral calcification (Figure 2). Pleural fluid analysis revealed an exudate with lymphocytic pleocytosis, bacterial, fungal and mycobacterial cultures were negative. Cytology was negative for malignant cells. Pleural biopsy revealed non-caseating granulomas and Mycobacterial culture of the pleural tissue was negative. Histology of right supraclavicular lymph node showed non-caseating granulomatous inflammation, and cultures were negative. Based on these clinico-radiological-pathological features and non-response to anti-tuberculous therapy, she was diagnosed to have sarcoidosis.

She was initiated on corticosteroids and all antituberculous medications were discontinued. She had significant improvement of dyspnea and cyanosis disappeared. Repeat chest radiograph showed marked decrease in the effusion. Her follow

References


PubMed ID: 16388184

Figure 1: HRCT thorax, lung window, the image shows thickening of the peribronchovascular interstitium (arrowhead) and minimal fissural beading (arrow)

Figure 2: HRCT thorax, mediastinal window, image shows bilateral pleural effusion with mediastinal adenopathy (arrowheads)
up HRCT scans showed evidence of residual fibrosis with significant reduction in nodularity.

The presence of bilateral large effusions in sarcoidosis is unusual. The reported prevalence of pleural involvement in sarcoidosis varies from 0 to 5% \(^1\) with unilateral, small effusions usually. Clinically significant bilateral effusions in sarcoidosis are rare. There are few other reports of sarcoidosis presenting with bilateral pleural effusions but the quantity of fluid was small and clinically insignificant.\(^2\) The growth of one colony of *Mycobacterium tuberculosis* on culture from the lesion in our patient reiterate the possibility that mycobacteria or some of its components may be capable of inducing the immune response and the pathological changes of sarcoidosis.\(^3\)

Hence, sarcoidosis is an important treatable differential diagnosis to be considered in a patient with bilateral pleural effusions especially in the setting of associated pulmonary involvement, non-casating granulomas\(^4,5\) and non-response to antituberculous therapy.

**Balasubramanian P, Mathew J, Cherian R*, Abraham OC**,
Departments of Medicine and *Radiodiagnosis, Christian Medical College and Hospital, Vellore, India.

**Correspondence:**
John Mathew, E-mail: JOHNMATHEW@cmcvellore.ac.in

**References**


PubMed ID: 16388185