A 41-year-old patient presented with cough, dyspnoea and malaise.

Imaging Findings:

Patient was referred to our hospital from another local hospital where chest radiograph was performed and showed bilateral lung nodules and hilar lymphadenopathy. Subsequent CT scan revealed marked bilateral hilar and mediastinal lymphadenopathy, diffuse multiple fine pulmonary nodules and ground-glass opacities. Although these miliary opacities were diffuse, they demonstrated an upper and middle lung zone predominance. A bronchoscopic biopsy was performed and showed noncaseating granulomas with multinucleated giant cells suggestive of sarcoidosis.

Discussion:

Sarcoidosis is a multisystem granulomatous disease of unknown aetiology, characterized by the presence of noncaseating granulomas. These granulomas represent a chronic immunologic response resulting from a cell-mediated response to specific antigenic stimulation and are distributed primarily along the lymphatics in the peribronchovascular interstitial space, and to a lesser extent, in the subpleural interstitial space and interlobular septa [1].

50% of patients are asymptomatic. The most common clinical features at presentation are respiratory symptoms: dyspnea, dry cough and chest pain [4]. Nonspecific constitutional symptoms such as fever, malaise and weight loss may occur in about one-third of patients with sarcoidosis [4].

Chest X-ray has been used as an initial investigation for the diagnosis, staging and follow-up of sarcoidosis. High-resolution CT provides more detailed information on both typical and atypical pulmonary manifestations of sarcoidosis. The typical findings include bilateral lymphadenopathy, perilymphatic nodules, interlobular septal thickening and perihilar opacities. These parenchymal abnormalities are mostly seen in the upper and middle lung fields. In contrast, miliary opacities are rare and present in less than 1% of cases [2]. Miliary pattern is seen as tiny innumerable nodules located in a random diffuse distribution instead of the classic perilymphatic location. Other atypical manifestations are masslike or alveolar opacities, honeycomb-like cysts, mosaic attenuation, tracheobronchial involvement and pleural disease [2]. The final diagnosis of sarcoidosis is made based on compatible
clinical and radiologic findings, histologic demonstration of noncaseating granulomas and exclusion of other conditions which can mimic sarcoidosis.

Treatment of sarcoidosis depends on symptoms and functional or imaging evidence of disease progression. The clinical course ranges from spontaneous resolution in half of cases within 2 years [3] to chronic sarcoidosis. The main problems with chronic sarcoidosis are fibrosis, pulmonary hypertension and impaired quality of life.

Corticosteroids are first-line drug choice followed by methotrexate. TNF alfa antagonists are used in refractory sarcoidosis which refers to patients progressing despite treatment [3].

To help reduce morbidity and mortality it is important to recognize both the typical and atypical radiologic patterns of the disease. When miliary pattern is seen, the differential diagnosis should include miliary tuberculosis, pneumoconiosis and metastatic lesions [2].

Written informed patient consent for publication has been obtained.

Differential Diagnosis List: Miliary sarcoidosis, Miliary tuberculosis, Pneumoconiosis, Metastatic lesions

Final Diagnosis: Miliary sarcoidosis

References:


Description: Mediastinal window axial scan showing bilateral hilar and mediastinal lymph node enlargement. Origin: @ Department of diagnostic and interventional radiology, University hospital Dubrava, Zagreb/Croatia, 2019
Figure 2

Description: Mediastinal window axial scan showing mediastinal lymph node enlargement. Origin: @ Department of diagnostic and interventional radiology, University hospital Dubrava, Zagreb/Croatia, 2019
Description: Axial unenhanced high-resolution CT scan showed countless tiny micronodules and ground-glass opacities in a random distribution. Origin: Department of diagnostic and interventional radiology, University hospital Dubrava, Zagreb/Croatia, 2019