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INTRODUCTION

Cryptogenic organizing pneumonia (COP) is a rare interstitial lung disease (ILD) of unknown etiology [1-3]. It is characterized by presence of granulation tissue in the alveoli and distal bronchioles and patients often present with fever, malaise, cough or dyspnea [1]. However, due to its non-specific clinical manifestations, it may be easily missed especially when presentations are subtle [1]. Lung ultrasound is readily available and has a high sensitivity to identify ILD [4]. We report a case of a young lady who presented to us with shortness of breath and was later diagnosed as COP.

CASE REPORT

A previously healthy 27-year-old lady referred by private clinic to the emergency department with possible cardiac pathology. She complains of shortness of breath especially on exertion for 2 months which has affected her normal daily routines. She denied having upper respiratory tract infections preceding the symptoms. She was not tachycardic, not tachypnoeic and her spO₂ was 97% on room air but appears lethargic. Our initial impression was likely to be anxiety. However, on further review, she has grade 3 finger clubbing and bilateral basal coarse crepitations. Bedside ultrasound revealed irregular pleura with multiple B lines bilaterally. There was no abnormality found on chest x-ray. She was discharged with an early referral to the respiratory clinic with a probable diagnosis of interstitial lung disease based on the ultrasound findings. HRCT of the lungs reported bronchiectasis and subpleural peripheral consolidation at the right lung base which is suggestive of organizing pneumonia and left lower lobe consolidation with pleural effusion. COVID-19 and connective tissue screening (ANA, rheumatoid factor, serum complements and myositis panel) were negative. Bronchioalveolar lavage fluid analysis showed no tuberculosis and no malignant cells present. No lung biopsy was done. She was started on a course of oral prednisolone and 3 months later is able to resume her normal daily routines, including jogging.

Radiological findings:



Figure 1: LUS with pleural thickening



Figure 2: Chest x-ray with no significant abnormalities



Figure 3: HRCT showed left lower lobe consolidation

DISCUSSION

Organizing pneumonia (OP) can be divided into idiopathic (cryptogenic) and secondary OP [1, 2]. Causes of secondary OP includes infection, acute respiratory distress syndrome and connective tissue disease [1, 2]. COP occurs in 3 stages of which it starts with formation of fibrinoid inflammatory cell clusters within the alveoli. This is followed by formation of intra-alveolar fibro-inflammatory buds with reducing inflammatory cells. In the final stage, fibrotic buds mature and there will be complete disappearance of inflammatory cells and these fibrotic buds may give rise to collapsed alveoli [2]. In establishing a diagnosis of ILD, British Thoracic Society recommends HRCT in cases of uncertain clinical assessment with normal chest x-ray findings and the most common characteristic HRCT finding of COP is focal subpleural consolidation [2]. In addition, the use of LUS has shown to have a 93% sensitivity and 73% specificity in comparison to HRCT hence making LUS an easily accessible alternative tool in the emergency department to aid in diagnosis of ILD [4]. Findings in LUS include multiple B lines and pleural irregularity [4, 5]. For treatment of COP, about 60% of patients responds well to prednisolone and it has been proven to improve symptoms rapidly in COP [2]. However relapses are common upon tapering or stopping the drug [1]. Patients who are steroid resistant or unable to tolerate side effects of corticosteroids can be started on steroid sparing agent as an alternative treatment option [3]. In conclusion, COP is not an easy diagnosis to make, especially in the emergency department. Both COP and secondary OP have similar clinical presentations and findings, hence other causes need to be ruled out before making a conclusion of COP [2]. LUS in emergency department assist in picking up signs of interstitial lung disease, which eventually leads to early diagnosis, early treatment and better outcome for the patient.

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