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Case Report of Concomitent Tuberculosis and Sarcoidosis

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Abstract: Tuberculosis and Sarcoidosis are chronic diseases that rarely occur concomitantly. Sarcoidosis is a multisystem disorder of unknown etiology characterized pathologically by the presence of non-caseating granulomas in involved tissues. We are reporting a rare case of concominant Pulmonary Tuberculosis and pulmonary Sarcoidosis in a 58yrs old female diabetic patient who was previously diagnosed with pulmonary tuberculosis bacteriologically confirmed on sputum examination and treated with antitubercular therapy presented with progressive dyspnoea and dry cough.
Keywords: Pulmonary Tuberculosis, Sarcoidosis , AFB, Granulomatous

INTRODUCTION

Tuberculosis and sarcoidosis are chronic granulomatous diseases. Tuberculosis is infectious disease caused by *Mycobacterium tuberculosis*(MTB) characterized by granulomas with caseous necrosis, and the treatment is focused on elimination of microorganism. While Sarcoidosis is a multi system noncaseating granulomatous disorder with similar clinical, histological and immunologic features to tuberculosis but of unknown etioloy. Clinically, it is often difficult to differentiate sarcoidosis from tuberculosis; especially when caseous necrosis is not seen and the acid fast staining is negative in biopsy tissue of tuberculosis [1,2]. Due to the marked clinico-radiological similarity of these entities and high prevalence of tuberculosis, these patients receive repeated courses of anti-tubercular therapy (ATT) while lung damage continues to progress [10]. Overall mortality from sarcoidosis is 1-5% usually from respiratory, cardiac or central nervous system disease [3]. These diseases occur concomitantly very rarely [4, 5].

Less commonly, tuberculosis develops as an opportunistic infection in patients following corticosteroid treatment for sarcoidosis. Rarely do you find sarcoidosis and tuberculosis coexisting in the same patient [5]. Distinguishing sarcoidosis from pulmonary tuberculosis can sometimes be a great challenge to physicians, especially in developing countries where there is high prevalence of tuberculosis.

CASE REPORT

50yrs female diabetic patient was previously diagnosed with PTB and treated with antitubercular therapy DOTS with good compliance 3yrs ago, presented 8months later with progressive dyspnoea and dry cough. On respiratory examination bilateral fine crackles was present and sputum for AFB is negative. Her ANA profile was negative , serum angiotensin converting enzyme was raised 96IU, serum calcium-11mg/dl and chest X-ray showed fibrosis with cavitary lesion in left upper zone and bilateral interstitial opacities in mid and lower zone and with right pleural thickening. High resolution computerized tomography of chest showed diffuse fine nodular lesions in both lungs distributed predominantly along peribronchial, fissures and cavitary lesion in left apico posterior segment of upper lobe. Patient did not agree for bronchoscopy and lung biopsy. Patient was treated with oral corticosteroids. Patient showed very good clinical and radiological improvement except for left cavitary lesion persisting and drop in ACE level and presently patient is on a maintenance dose of oral corticosteroids.

Fig.1: X-ray showed fibrosis with cavitary lesion in left upper zone and bilateral interstitial opacities in mid and lower zone and with right pleural thickening

DISCUSSION

Non-specific constitutional symptoms Sarcoidosis include fever, fatigue, malaise and weight loss that are present in approximately one-third of patients. Hilar and mediastinal lymphadenopathy are usually seen in chest radiograph. Other characteristic findings are interstitial lung disease, or occasional calcification of affected lymph nodes. Most commonly, thickening of bronchovascular bundles and perilymphatic distribution of nodules are most common in high resolution CT of the thorax [9].

Sarcoidosis may be associated with a wide range of symptoms. It may affect most organs, including the skin [6]. It frequently involves the lungs and can result in pulmonary fibrosis [10]. Skin lesions may be the only manifestations, or just one of several other organ involvements. Cutaneous lesions in sarcoidosis are present in ~25% of sarcoidosis patients [6]. The association of sarcoidosis with TB still remains complex, although it has been thoroughly studied. TB has been described as both preceding and co-existing with sarcoidosis as well as being an opportunistic infection in patients with a documented disease who mostly follow corticosteroid therapy, as glucocorticoids greatly depress the disordered cell-mediated immunity observed [5, 7].

CONCLUSION

Tuberculosis and sarcoidosis are chronic diseases that rarely occur concomitantly. There is a dilemma in diagnosis between tuberculosis and sarcoidosis we should advance with corticosteroid therapy until we have microbiological confirmation of mycobacterium culture.

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