Case Report

A young female with pulmonary sarcoidosis masquerading as bronchial asthma

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ABSTRACT

Sarcoidosis is a multisystem granulomatous disorder that commonly affects the lungs. Accumulation of non-necrotizing granulomas and subsequently fibrosis in the lungs and other organs accounts for the clinical manifestations. A young female patient complaining of shortness of breath, cough and wheezing. First she was treated as asthma for long time and there was no improvement. Then a computed tomography of chest was performed and fine needle aspiration from hilar lymphnode confirmed pulmonary sarcoidosis. She received corticosteroid therapy for six months and her health situation become well.

Key words: *sarcoidosis, computed tomographic scans, fine needle aspiration cytology, asthma, serum calcium.*

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INTRODUCTION

Sarcoidosis is a multisystem, chronic granulomatous disease of unknown etiology that commonly affects the lungs[1]. after full stop Whereas some patients with pulmonary sarcoidosis are asymptomatic, many report cough, dyspnea, fatigue, unintentional weight loss, and night sweats[2]. Pulmonary sarcoidosis usually presents with nonspecific symptoms and that's why computed tomographic (CT) scans are instrumental for diagnosis. Bilateral, symmetric micronodules in a peribronchovascular distribution with upper and middle lung zone predominance accompanied by bilateral, symmetric hilar lymphadenopathy are the common radiological findings[3]. We present a case of stage II pulmonary sarcoidosis who was treated initially as a case of bronchial asthma.

CASE REPORT

A 25-year-old lady presented to our hospital with the complaints of dry cough and occasional shortness of breath and wheezing for last 1 year. She had sought repeated medical attention for this and several times she was treated a case of asthma with different types of inhalers with no significant improvement. Our patient was otherwise healthy, with no known chronic diseases and her systemic review was unremarkable. Her vitals were stable and within normal limits and no regional lymph node enlargement was found. Respiratory, cardiovascular, abdominal, and neurological examinations were unremarkable. Laboratory tests showed hemoglobin of 12 g/dL, erythrocyte sedimentation rate of 29 mm/h, serum calcium 8 mg/dl, serum angiotensin converting enzyme 65 U/L (ref. value), sputum for acid-fast bacilli/ gene xpert negative,

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Mantoux test 2 mm at…. Chest X-ray showed bilateral hilar lymphadenopathy (Figure 1). CT scan of chest showed multiple enlarged lymphnodes in pre- and para-tracheal and both hilar regions (Figure 2). CT scan also showed diffuse increased attenuation, patchy opacities, septal thickening and centrilobular nodules with branching pattern in most of the segments of both lungs predominantly central region (Figure 3). FNAC of left hilar lymphnode revealed moderate cellular material containing lymphocytes, polymorphs, pulmonary macrophages, a few giant cells, focal collections of epithelioid cells without any caseation compatible with sarcoidosis. She was started on treatment with prednisolone 30 mg daily. Within 1 month of treatment, she began to experience improvement of her cough and dyspnea. We tapered the dose to 7.5 mg within next 3 months and continued for 6 months.

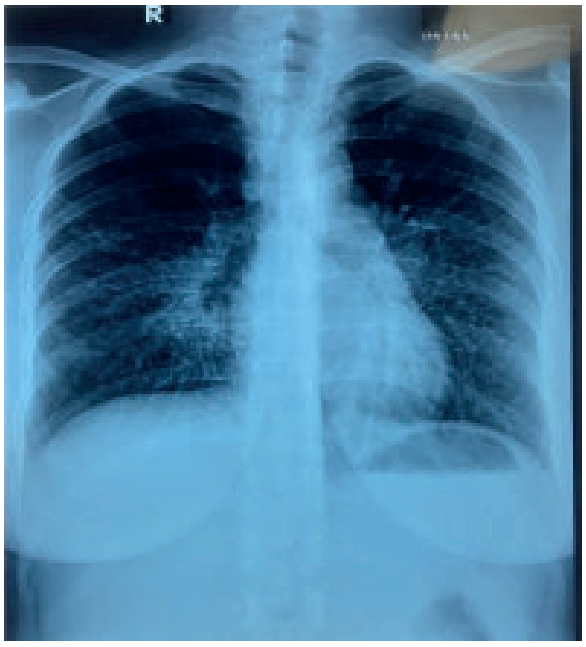

Figure 1. Chest X-ray showed bilateral hilar lymphadenopathy

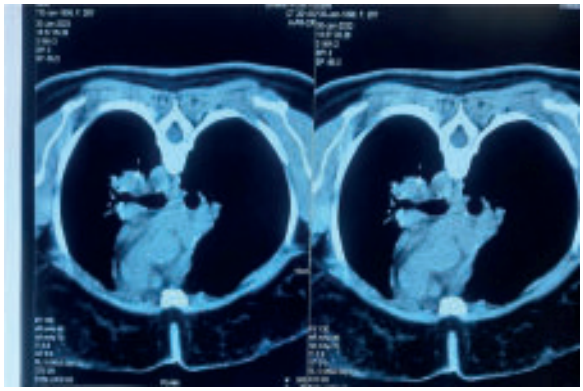

Figure 2. CT scan of chest showed multiple enlarged lymphnodes in pre and para-tracheal and both hilar region

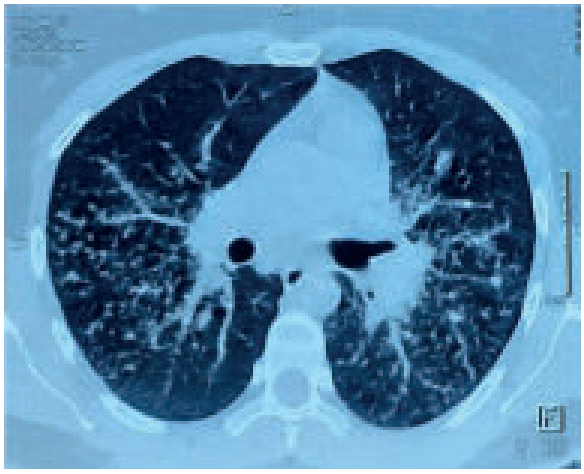

Figure 3. CT scan OF chest showed diffuse increased attenuation, patchy opacities, septal thickening and centrilobular nodules with branching pattern in most of the segments of both lungs.

DISCUSSION

Sarcoidosis is a multisystem disease of unknown etiology. Lung involvement is very common. Patients with pulmonary sarcoidosis are often asymptomatic at presentation. But symptomatic patients usually report dry cough, dyspnea or nonspecific chest discomfort[4]. Pulmonary symptoms are frequently accompanied by systemic manifestations such as fatigue, malaise, fever, and weight loss[5]. Typical radiological presentation of pulmonary sarcoidosis is bilateral hilar lymphadenopathy but atypical radiographic presentations occur in 15–25% of patients[6]. These findings can include diffuse ground-glass opacities, honeycombing, multiple nodules, or necrotizing consolidations[6] . If the patient does not have extrathoracic involvement in accessible tissues or if a biopsy would be less preferable than a bronchoscopy or transbronchial needle aspiration (TBNA) of radiographically enlarged intrathoracic lymph nodes or lung parenchyma are the next choice of investigation. The characteristic morphologic feature of histopathology of sarcoidosis is the non-necrotizing

granuloma. The sarcoidosis granuloma is a focal, chronic inflammatory reaction formed by the accumulation of epithelial cells, monocytes, lymphocytes, macrophages, and fibroblasts[7]. Our patient presented with typical features of asthma like cough, shortness of breath and occasionally with wheeze which is atypical presentation of pulmonary sarcoidosis. That's why initially she was treated with bronchodilator inhaler. Then we diagnosed this is a case of stage II pulmonary sarcoidosis on the basis of radiological features and histopathology findings. Asymptomatic pulmonary sarcoidosis have low risk of disease progression and usually do not require treatment. A large majority of asymptomatic patients with stage I disease and nodular sarcoidosis will have spontaneous remission, while patients with stage II and III disease have a more variable disease course[8]. Oral corticosteroids are the first line of therapy in patients with symptomatic or progressive disease. Treatment with prednisolone 0.5 mg/kg/day for 4 weeks, then reduced to maintenance dose which will control symptoms and disease progression, should be used for a period of 6-24 months[9]. Methotrexate is a commonly chosen second-line agent because it has been shown to be effective in decreasing the necessary dose of prednisone when used in combination[10]. For refractory cases, leflunomide and tumor necrosis factor-á antagonists, such as infliximab, adalimumab or etanercept, have demonstrated efficacy in small observational studies.[11]

Conclusion

Atypical manifestations of pulmonary sarcoidosis are challenging and also difficult to treat. Here we presented a case of pulmonary sarcoidosis who was initially long term treated as asthma. Only a few case have been reported in patients who has asthma like features but finally diagnosed pulmonary sarcoidosis.

Authors' contribution: MMR was involved in the diagnosis, patient management, manuscript writing and literature review. FBH helped in editing. All authors were involved in evaluation and management of the case.

Consent: Informed written consent was taken from patient regarding publication of this case report. Send the consent paper signed by the patient

Conflicts of interest: Nothing to declare.

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