Sarcoidosis Presenting as Fatigue and Weakness

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ABSTRACT

Sarcoidosis is a systemic granulomatous disorder of unknown cause that occurs in both men and women of all races. It typically presents in patients after 20 years of age. Sarcoidosis most frequently involves the lung, but up to 30 percent of patients present with extra-thoracic manifestations. It can involve multiple organs to a variable extent and degree. In areas, where tuberculosis is endemic, the diagnosis of sarcoidosis may be overlooked and misdiagnosed because of clinical and radiographic resemblance. Herein, we present a case of a middle-aged man who visited multiple physicians with constitutional symptoms and was treated symptomatically but did not improve. He later developed skin lesions which were biopsied and led to correct diagnosis of sarcoidosis. Hence, a clinician should be aware of all the spectrums of presentations of rare diseases like sarcoidosis and always keep it as a differential when treating common diseases like tuberculosis.

Key Words: *Sarcoidosis, Skin lesions, Fatigue.*

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INTRODUCTION

Sarcoidosis is a multisystemic disease of unknown etiology affecting people of all ages and races.[1] The lungs are the most frequent organs involved; however, extrapulmonary sites like skin, eyes, liver, spleen, and bone are also involved. The basis of diagnosis is non-caseating granulomas found on histopathology. However, some cases do not present with typical symptoms specific to an organ and; hence, can make the diagnosis challenging. Certain constitutional symptoms like fever, fatigue, and lethargy can be an initial manifestation of sarcoidosis and can easily lead to alternate diagnosis especially in a country where tuberculosis is endemic. Hence as a clinician, one should be aware of all the spectra of sarcoidosis so that accurate diagnosis and appropriate management can be facilitated.

CASE REPORT

A 42-year old man, a known case of non-insulin dependent diabetes mellitus, presented to the outpatient clinic with the complaint of generalised weakness, fatigue on moderate exertion, pain in limbs and low-grade undocumented fever since one year. He visited multiple physicians and multiple clinics with these complains and received symptomatic treatment, but the symptoms did not improve much.

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Fatigue and weakness were the predominant symptoms that persisted despite being advised multiple medications. Later, he started developing erythematous plaques on skin predominantly on the left arm but later involving right leg and axilla.

On examination, patient was vitally and hemodynamically stable. There was no hypotension throughout the clinical course. Due to the progressive nature of the skin lesions, dermatology opinion was taken and incisional skin biopsy was planned and done uneventfully. It reported chronic granulomatous inflammation without necrosis representing nodular sarcoidosis. Subsequently, the patient was referred to pulmonary outpatient clinic and his laboratory and radiological workup was done to see the involvement of other organs.

Relevant laboratory workup showed Erythrocyte Sedimentation Rate (ESR) to be 23 mm/1st hour (normal: 0-15). Angiotensin Converting Enzyme (ACE) levels were >150 U/L. Serum calcium was 9.9 mg/dl (normal: 8.6-10.2 mg/dl). High resolution computed tomography (HRCT) scan was done which showed infiltrates in bilateral lung fields with bilateral hilar and mediastinal lymphadenopathy. Pulmonary function tests showed forced vital capacity (FVC) of 4.11(95%), forced expiratory volume in one second (FEV1) was 3.46 (98%) with FEV1/FVC ratio of 84%.

The patient was then started on systemic and topical steroids, after which his symptoms improved. Gradually, steroids were tapered to a maintenance dose. He later became clinically stable and is on a regular outpatient clinic follow-up.

DISCUSSION

Sarcoidosis is a multi-systemic disease with worldwide distribution; and it affects people of all races. Sarcoidosis usually involves the lungs but extra-thoracic manifestations of sarcoidosis are present in approximately 30% of cases.[2] Skin lesions

are one of the most common extra-thoracic manifestations of sarcoidosis.[3] Cutaneous sarcoidosis in black South Africans was studied by Jacyk.[4] A total of 54 patients were studied, of which 45 were women and nine men. The presenting features in all patients were skin lesions; however, in 40 patients, systemic sarcoidosis was found on further clinical workup.[4] Hence, patients do present with skin manifestations as the presenting feature of sarcoidosis; but on further evaluation, the majority tend to have systemic involvement with the lung being the most commonly involved organ. In the clinical update of sarcoidosis by Costabel, different modes of clinical presentation have been defined.[5] These include fever, weight loss, drenching sweats, and fatigue. The author classified sarcoidosis on the basis of the onset of symptoms into two subsets. The first one, called acute sarcoidosis, with abrupt onset more frequent in Caucasians, may present as Lofgren's syndrome, which is characterised by bilateral hilar adenopathy, ankle arthritis, erythema nodosum, and frequently constitutional symptoms including fever, myalgia, malaise, and weight loss. The prognosis in this subset is good. The second one, labelled as chronic sarcoidosis, has an insidious onset. Organ-related symptoms, often related to pulmonary infiltration, such as cough and dyspnoea, predominate; whereas, constitutional symptoms are rarer than the acute form. Therefore, sarcoidosis should always be considered as one of the differential diagnoses in patients with fever of unknown origin.[5,6] Fatigue has been underestimated in sarcoid patients and ironically, it is one of the most frequently reported symptoms. De Kleijn *et al* in their systemic review identified fatigue as one of the most prominent symptoms affecting the quality of life in patients with sarcoidosis.[7] In an epidemiological study done in the Dutch population, the clinical presentation of sarcoidosis was assessed and it was found that the most frequently reported symptom was fatigue (71%), followed by dyspnoea (70%), and arthralgia (52%).[8] Fleischer *et al* studied the factors leading to fatigue in sarcoidosis and found that associated diseases like pulmonary hypertension and sleep apnoea had the greatest impact in elevating fatigue. Moreover, extra-thoracic sarcoidosis involving muscles, bones, and nerves is most strongly associated with fatigue. The association between the duration of prednisolone therapy and fatigue was weak.[9] Spruit *et al* reported that patients with sarcoidosis have increased skeletal muscle weakness resulting in fatigue. This often leads to reduced health status and exercise tolerance.[10]

Our patient had constitutional symptoms including low-grade fever, fatigue, and arthralgia which masked and delayed the diagnosis for a year. Although sarcoidosis is not a difficult diagnosis to establish; however, in Sub-continent, where tuberculosis is endemic, physicians tend to treat it as tuberculosis first, owing to clinical and radiological similarities. Guleria *et al* discussed the same fact, that in India, there is a strong likelihood that sarcoidosis is misdiagnosed as tuberculosis owing to high prevalence and clinical and radiological resemblance.[11] Sarcoidosis mimics a wide variety of diseases. The natural history of sarcoidosis is highly variable. In some instances, spontaneous remission can occur while the remaining cases have chronic progressive disease.[12] Hence as a clinician, one should always suspect sarcoidosis in a patient with progressive constitutional symptoms. Timely diagnosis can facilitate the management of the disease in the early stages when the prognosis is good. When the disease progresses, both the management and the prognosis are adversely affected. Although this presentation is not rare, the vagueness of the symptoms can always deceive a clinician towards alternative diagnoses.

PATIENT'S CONSENT:

Informed and written consent was taken from the patient to publish the data.

CONFLICT OF INTEREST:

The authors declared no conflict of interest.

AUTHORS' CONTRIBUTION:

SMZ: Involved in writing the manuscript and literature review.
NHR: Conceived the idea, edited and reviewed the manuscript.

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