Print ISSN: 2321-6379
Online ISSN: 2321-595X
DOI: 10.17354/ijss/2017/34

Case Report

Overlap/Diagnosis by Seclusion: A Case Report

Gourahari Pradhan[1], Pradeep Kumar Giri[2], Debabrata Dash[3], Thitta Mohanty[4], Manoranjan Patnaik[5]

[1]Senior Resident, Department of Pulmonary Medicine, All India Institute of Medical Sciences, Bhubaneswar, Odisha, India, [2]Senior Resident, Department of Pulmonary Medicine, SCB Medical College, Cuttack, Odisha, India, [3]Senior Resident, Department of Microbiology, All India Institute of Medical Sciences, Raipur, Chhattisgarh, India, [4]Associate Professor, Department of Pulmonary Medicine, SCB Medical College, Cuttack, Odisha, India, [5]Professor & Head, Department of Pulmonary Medicine, SCB Medical College, Cuttack, Odisha, India

Abstract

A 32-year-old male diabetic patient presented with dry cough, hemoptysis, joint pains for 2 months. He had clinical features suggestive of both sarcoidosis (bilateral hilar adenopathy, negative Mantoux test, noncaseating granuloma in transbronchial lung biopsy) and tuberculosis (bronchial aspirate polymerase chain reaction positive for mycobacteria). This case report highlights the diagnostic dilemma between tuberculosis, sarcoidosis, and combined tuberculous sarcoidosis and the challenge physician has to face in managing such a patient with concomitant diabetes mellitus.

Key words: Diabetes mellitus, Sarcoidosis, Tuberculosis, Tuberculous sarcoidosis

INTRODUCTION

Classically sarcoidosis is known to be prevalent in a community coming out of the scourge of tuberculosis. However, it has been documented now that sarcoidosis can precede tuberculosis, follow tuberculosis or even coexist with tuberculosis. There is good evidence now to support the theory that mycobacterium tuberculosis is causally related to sarcoidosis. This presentation is an attempt to emphasize the need to differentiate undisputed tuberculosis or sarcoidosis or to define the overlap tuberculous sarcoidosis and the management when coexisting with diabetes mellitus.

CASE REPORT

A 32-year-old Asian male patient presented with dry cough and joint pains for 2 months and three bouts of hemoptysis in last 1½ months. He worked as a chef in UK and was an occasional smoker and social drinker. No other significant past or family history. To start with he developed running nose, fever, myalgia with one episode of loss of consciousness without any seizures while residing in UK. He was admitted in a hospital where his diabetic status was first detected. He was managed as lower respiratory tract infection with oral amoxicillin with clavulanate and metformin. Following improvement he was discharged after 3 days of hospitalization. A month later he traveled back to India and presented to us with above complaints. At presentation his vitals were stable. He was an average built man, no positive general examination findings. His blood investigation reports were total leukocyte count - 11,400/μl, DC-N 62%, L 33%, E 5%, erythrocyte sedimentation rate (ESR) 90/1st h, widal test positive (1/80), fasting blood sugar test 119 mg/dl, postprandial blood sugar 180 mg/dl, hemoglobin A1c 7.2 %. Rest investigations within normal limits. Chest radiograph showed bilateral hilar lymphadenopathy (Figure 1). Spirometry within normal limit. Chest computed tomogram revealed right paratracheal, pretracheal, paraaortic, and bilateral hilar lymph nodes enlargement with linear reticular shadows in bilateral lung parenchyma suggesting diagnosis of sarcoidosis, but tuberculosis was kept in differential diagnosis (Figure 2). Sputum for acid fast bacilli was negative both in spontaneous as well as induced samples. Bacterial culture of the sputum showed no growth. Serum angiotensin converting enzyme was high (103 U/L); serum calcium 2.2 mmol/L, 24 h urine calcium level normal. Tuberculin skin test (10 TU) was negative. Ultrasound of abdomen showed mild splenomegaly and fatty liver. No cutaneous or opthalmological abnormality. Fiberoptic bronchoscopy showed extrinsic compression of carina, bilateral main

Access this article online

www.ijss-sn.com

Month of Submission : 11-2016
Month of Peer Review : 12-2016
Month of Acceptance : 12-2016
Month of Publishing : 01-2017

Corresponding Author: Dr. Gourahari Pradhan, Department of Pulmonary Medicine, House No.052, I Block, Cosmopolis Apartments, Aiginia, Dumduma, Khandagiri, Bhubaneswar - 751 019, Odisha, India. Phone: +91-8895394499. E-mail: drghpradhan@gmail.com

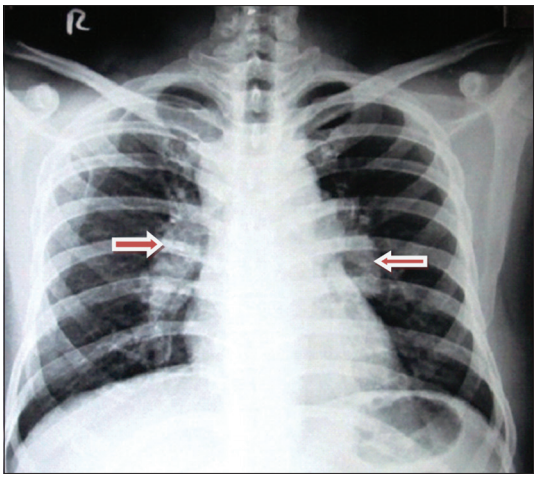

Figure 1: Chest X-ray showing bilateral hilar adenopathy (arrows)

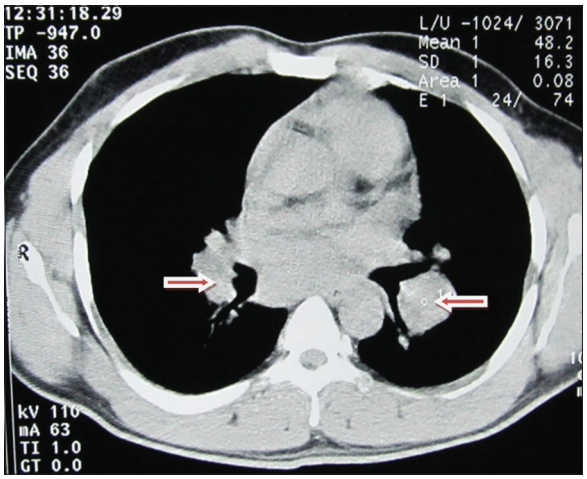

Figure 2: Computed tomography chest showing bilateral hilar adenopathy (arrows) – "Potato nodes" appearance

bronchi, and mucosal inflammation. Transbronchial lung biopsy showed noncaseating granuloma, bronchial aspirate positive for mycobacterium tuberculosis by polymerase chain reaction (PCR) method. A diagnosis of tuberculous sarcoidosis was made. Antitubercular therapy was started along with insulin for optimal glycemic control and other supportive treatment. Steroids were avoided considering the diabetic status. His clinical status, as well as radiologic picture, improved significantly after 2 months of therapy. Subsequently, he was lost to follow-up.

DISCUSSION

The term tuberculous sarcoidosis was first proposed by Scadding in the year 1962 for patients having clinicopathological features of both tuberculosis and sarcoidosis.[1] Pathogenesis of sarcoidosis has been a matter of intense scrutiny since long and till now it's not exactly known; but role of *Mycobacterium tuberculosis* has been increasingly supported.[2] Combined tuberculosis and sarcoidosis or tuberculous sarcoidosis can present in three patterns: (a) Patient of tuberculosis developing sarcoidosis later, (b) patient having coexistent tuberculosis and sarcoidosis, (c) patient of chronic sarcoidosis developing overt tuberculosis later. Shah *et al.* has proposed diagnostic criteria for tuberculous sarcoidosis and consider this as a transition of evolution of sarcoidosis from tuberculosis.[3,4] The salient points of these criteria are raised ESR, raised SACE, tuberculin test positive/negative, sputum positive/negative for *M. tuberculosis*, culture negative for tuberculosis, PCR of biopsy tissue positive for *M. tuberculosis*, chest X-ray bilateral hilar, right paratracheal lymphadenopathy, micro or macronodules in computed tomography scan of chest, no expected response to antitubercular therapy. However, the authors suggested these criteria should be considered open for modification.

CONCLUSION

In Asians more so in Indians with high incidence and prevalence of tuberculosis such concomitant presence of noncaseating granulomas, raised SACE levels, negative tuberculin test, PCR positivity for *M. tuberculosis* with mediastinal lymphadenopathy raise the possibility of coexisting tuberculosis and sarcoidosis. Furthermore, this supports the hypothesis of mycobacterial species, and it's components inducing pathological changes and clinical manifestations of sarcoidosis.

ACKNOWLEDGMENTS

We acknowledge the sincere efforts of our hospital staff, technicians, and cooperation of the patient who have contributed toward this work.

REFERENCES

1. Scadding JG. Tuberculosis in the etiology of sarcoidosis. Brompton Hosp Case Rep 1961;30:121-43.
2. Brownell I, Ramírez-Valle F, Sanchez M, Prystowsky S. Evidence for mycobacteria in sarcoidosis. Am J Respir Cell Mol Biol 2011;45:899-905.
3. Shah JR, Hede J, Mathur RS. Diagnostic criteria of tuberculous sarcoidosis. Lung India 2009;26:86-8.
4. Shah JR. Tuberculous sarcoidosis. Lung India 2007;24:83-6.

How to cite this article: Pradhan G, Giri PK, Dash D, Mohanty T, Patnaik M. Overlap/Diagnosis by Seclusion: A Case Report. Int J Sci Stud 2017;4(10):168-169.

Source of Support: Nil, **Conflict of Interest:** None declared.