International Journal of Advances in Medicine
Sivasamy M et al. Int J Adv Med. 2022 Dec;9(12):1222-1223
http://www.ijmedicine.com
pISSN 2349-3925 | eISSN 2349-3933
DOI: https://dx.doi.org/10.18203/2349-3933.ijam20223025

Case Report

An interesting case of melioidosis: a mimicry of pulmonary tuberculosis

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Received: 24 October 2022
Revised: 14 November 2022
Accepted: 16 November 2022

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ABSTRACT

Melioidosis is caused by *Burkholderia pseudomallei* which is a soil-dwelling aerobic bacterium reported mostly in tropical and subtropical areas, especially in Asia (Southeast) and Australia (Northern part). Melioidosis is a severe infection that can manifest as chronic debilitating pneumonia mimics pulmonary tuberculosis. Here, we reported a case of melioidosis, in 51-year-old men with poorly controlled type 2 diabetes mellitus. The patient recovered with appropriate intravenous antibiotics and supportive medications.

Keywords: Melioidosis, *B. pseudomallei*, Immunocompromised

INTRODUCTION

Melioidosis, though endemic in the Southeast Asian regions, such as Thailand, Singapore Malaysia and Australia, was also reported from Africa, North and South America, Pacific and Caribbean islands, Middle east and Europe.[1,2] In India, it is more prevalent in the south, though also reported from other parts.[3,4]

The disease is underreported due to its protean manifestations and low physician index of suspicion. Many laboratories relying on conventional culture methods confuse it with *Pseudomonas* species due to common phenotypic characteristics. John et al reported that the disease could be more prevalent than what is available in literature.[5]

Melioidosis is seen more in diabetics and other immunosuppressed conditions6. We reported a case of 51-year-old men who were undiagnosed initially and later diagnosed as melioidosis.

CASE REPORT

A 51-year-old male (farmer) was admitted with chief complaints of fever with chills and rigors for one week, breathlessness for one week. He had cough since two months with history of pain in the right knee. He was recently diagnosed to have type 2 diabetes mellitus on oral metformin 500 mg twice daily. On examination he was febrile (temperature=102 °F) and dyspnea. His pulse rate was 106 beats/min and blood pressure of 110/80 mm Hg. Systemic examination revealed fine crepitation in the left infra scapular area.

Investigations showed Hb-13.8 g/dl, TLC-7500 cells/cumm, platelet count-1.97 lakhs/cumm, ESR-56 mm/hr, CRP-190.2 mg/l, random blood sugar-324 mg/dl, HbA1C-11.2%. Urine routine-ketone was positive. CT thorax plain shows focal fibrotic band noted in left lower lobe lateral basal segment Blood culture showed *B. pseudomallei*. Patient was started on intravenous ceftazidime 1 gm twice daily and continued for 2 weeks along with insulin. He was started on eradication therapy

with oral trimethoprim/sulfamethoxazole (800/160 mg) two tablets twice a day with a plan to continue for 3 to 6 months. He improved dramatically and was asymptomatic on follow-up.

Figure 1: Isolated colonies of *B. pseudomallei* identified in automated system VITEK2 COMPACT showing the characteristic cornflower head morphology.

DISCUSSION

Melioidosis is a clinical entity ranging from acute fulminant septicemia to a chronic state. Three modes of acquisition (inhalation, ingestion, inoculation) are known. Skin and soft tissue infections may occur after minor wounds or from hematogenous spread.[6] Immunosuppressed persons are more at risk. It is an emerging infection in India with the first case reported in a child from Dapoli in Maharashtra in 1990. It was reported also from Kerala, Karnataka, East, Northeast and the South East.[7-9]

Vidyalaksmi et al found fever to be the commonest complaint (96% cases) and diabetes mellitus as a predisposing factor which we found in both our cases.[10] The second case had a long history of fever attributable to the chronic form of melioidosis. Both cases belonged to an area where people are exposed to flood waters. Their agricultural background could explain the exposure. *B. pseudomallei* was present as an environmental saprophyte in soil and fresh surface water in endemic regions posing a high risk of infection to this group of people. Lack of clinical know-how of this disease and insufficient laboratory expertise usually hamper the diagnosis of the disease. Many authors have expressed similar concern of the factors that lead to under reporting. Therefore, it is worthwhile to document these cases. Both strains had similar antimicrobial susceptibility pattern hinting toward a common source. Further epidemiological studies are indicated to determine the geographical prevalance and risk factors of this condition.

CONCLUSION

High index of suspicion of melioidosis should be considered especially in diabetics. Early identification of diagnosis and institution of correct antimicrobials based on microbiology feedback is the cornerstone of the treatment.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: Not required

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Cite this article as: Sivasamy M, Shreenidhi R, Nishaanth MK, Jagadeesan M, Karthik SP. An interesting case of melioidosis: a mimicry of pulmonary tuberculosis. Int J Adv Med 2022;9:1222-3.