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IP International Journal of Medical Microbiology and Tropical Diseases

Journal homepage: www.innovativepublication.com

Case Report

A case of Melioidosis from Mumbai

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ARTICLE INFO

Article history:
Received 20-05-2020
Accepted 01-06-2020
Available online 06-07-2020

Keywords:
Melioidosis
Sepsis
Diabetes

ABSTRACT

Melioidosis, an underdiagnosed or an emerging infection in India, is mostly reported from Southern India. We report a case of splenic and hepatic abscesses with splenic vein thrombosis in a diabetic patient from Western India.

1. Introduction

"Melioidosis (This) is a disease so neglected, it's missing from the WHO list of neglected tropical diseases," says Melioidosis expert David Dance which was blogged by Julie Wolf.[1] It is a disease with enormous clinical diversity, spanning asymptomatic infection, localised skin ulcers or abscesses, chronic pneumonia mimicking tuberculosis, and fulminant septic shock with abscesses in multiple internal organs.[2] We present a case of multiple hepatosplenic abscesses with splenic vein thrombosis and incidental superior mesenteric artery dissection, in a diabetic patient.

2. Case

A 40 year old gentleman with hypertension and recently diagnosed Type- 2 diabetes, chef by occupation, presented with 1 week history of continuous fever and cough with expectoration. He also complained of watery stools and burning micturition since 2 days. On admission he was tachycardic with pulse rate of 110/min, BP of 100/70 mm of Hg and respiratory rate of 18/min. His routine laboratory investigations showed a total leucocyte count of 14,980 /mm,[3] C-reactive protein was 273.5 mg/dl, fasting blood sugar was 190 mg/dl, post-prandial blood sugar was 203 mg/dl and glycated haemoglobin was 8.92. Stool and Urine examination were within normal limit except glucose in urine. Two sets of Blood cultures were sent on admission. A CT scan of abdomen performed on second day revealed numerous variable sized abscesses in liver and spleen, with sub-capsular rupture of the abscess at the superior pole with secondary splenic vein thrombophlebitis and an incidental spontaneous dissection of superior mesenteric artery (Figure 1). He was started on Ceftriaxone and Metronidazole. Despite this, his temperature spiked again after 2 days and the aerobic bottles of admission blood culture sets (BacT/ALERT) flagged positive for Gram negative bacilli. Ceftriaxone was discontinued and patient was started on Meropenem. Subcultures from the blood culture bottles were done on 5% sheep blood agar and MacConkey's agar. On blood agar, the colonies were white (having a metallic sheen on further incubation), smooth, round, low convex and

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https://doi.org/10.18231/j.ijmmtd.2020.028

on MacConkey's agar the colonies were pinkish which later became rough with corrugated surface (Figure 2). Burkholderia pseudomallei was identified on Vitek2. Retrospective details, on enquiring, revealed that the patient had a travel history to his native place in the Ratnagiri district and had engaged in some farming activity. Antibiotic susceptibility was done using E-strip (HiMedia, Mumbai) for Meropenem only at that time which revealed an MIC of 1 mcg/mL. Subsequently antibiotic susceptibility was done for ceftazidime, ciprofloxacin, trimethoprim-sulfamethoxazole and doxycycline which had MICs of 1, 4, 1 and 2 mcg/mL respectively although this is not standardized. Clinical Laboratory and Standards Institute recommends broth microdilution method for the same.. Meropenem was continued for 28 days. On discharge, the patient was started on trimethoprim-sulfamethoxazole and continued further for 4 weeks. A repeat CT scan of abdomen performed after a month revealed resolving features of splenic and liver abscesses, resolving splenic vein thrombophlebitis and near-complete resolution of spontaneous sub-capsular rupture of splenic abscess in the superior pole. Contrast CT scan was repeated again after 4 months which showed near complete resolution of the abscesses in the spleen but relatively unchanged appearance of the liver lesions likely admixed with liver haematoma.

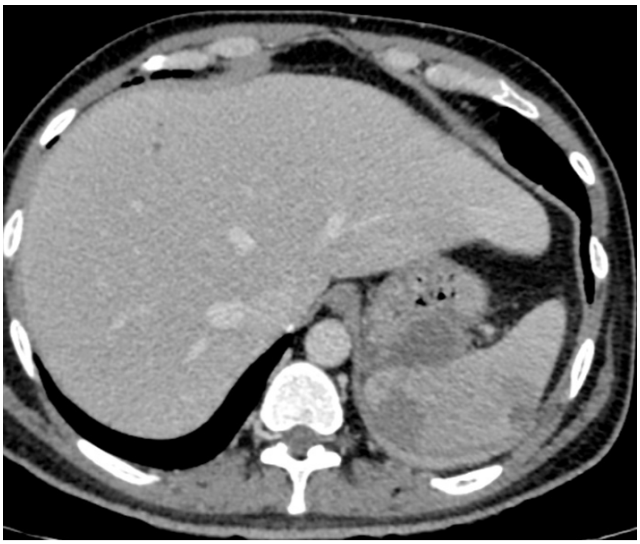

Fig. 1:

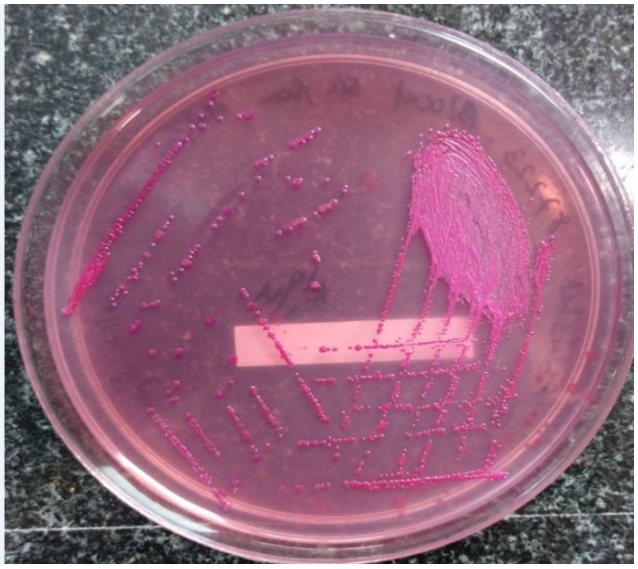

Fig. 2:

3. Discussion

Melioidosis is a disease of humans and animals resulting from infection with the soil and water bacterium Burkholderia pseudomallei.[2] It is endemic in Southeast Asian countries and Australia and is an emerging infection in other Asian countries including India.[3] An online search on Meliodosis.info reveals around 484 reported cases in India till 2016. Most cases are reported from South India with less than 10 from Maharashtra.[4] Humans are infected by percutaneous inoculation, inhalation, aspiration or ingestion.[2] Our patient was a recently diagnosed case of diabetes and various studies have shown that diabetes is an important risk factor (23% – 76%).[2,5] Our patient had a history of soil contact which probably led to the acquisition of the bacterium, although the exact route could not be ascertained. Similarly environmental exposure could be noted in two fifths of cases in a Malaysian study.[5] Melioidosis is a great masquerader[6] presenting as fulminant sepsis with abscesses in many organs.[2,4–6] Our patient had multiple abscesses in liver and spleen, one of them ruptured as was evident on CT scan; presumably leading to splenic vein thrombophlebitis. Our patient also had superior mesenteric artery dissection which may be attributed to diabetes and hypertension. Literature review doesn't reveal any such description to the best of our knowledge, although cases of mycotic aneurysms in aorta and other arteries are reported.[2,5,7] Also, it didn't require any specific intervention, since the patient was asymptomatic for the same. Since the patient was started on Meropenem and showed signs of improvement clinically and eventually radiologically we decided to continue with the same. Some observational data from Australia suggest Meropenem produces better outcomes than Ceftazidime in severe Melioidosis and should be the drug of choice.[2] Also, we decided to continue for 28 days of initial intensive therapy in view of multiple micro-abscesses in abdominal organs.[2,6] The patient responded well to eradication therapy with trimethoprim-sulfamethoxazole alone.[2,7]

4. Conclusion

Melioidosis, whether underreported, underdiagnosed or truly an emerging infection, requires a high index of suspicion especially in diabetics with multiple abscesses to initiate early treatment. Publishing such case reports would not only increase awareness but also make us aware of unusual associations or presentations that needs to be watched for in subsequent cases of this great deceiver.

5. Source of Funding

None.

6. Conflict of Interest

None.

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Cite this article: Parikh H, Toraskar K, Paunipagar B, Vakharia R, Gupte A. **A case of Melioidosis from Mumbai**. *IP Int J Med Microbiol Trop Dis* 2020;6(2):126-128.