Case Report

Burkholderia Pseudomallei Infection in a Diabetic Patient Presenting as Multiple Splenic Abscesses — A Case Report

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Background : Meliodosis is an infection by Burkholderia Pseudomallei, is now endemic in India. It can have varied clinical manifestations. We report a case of Meliodosis in a diabetic patient presented as multiple Splenic Abcesses.

Case Report : A 56-year-old male patient, manual labour, diabetic with uncontrolled glycemic levels presented with prolonged Fever and abdominal pain which on evaluation revealed multiple Splenic Abscesses. Culture of aspirate from abscess grew Burkholderia Pseudomallei. He improved with appropriate antibiotic therapy and Splenectomy.

Conclusion : The case is presented to highlight the importance of making early clinical and microbiological diagnosis for a better outcome.

[*J Indian Med Assoc* 2023; **121(4):** 63-5]

Key words **: Meliodosis, Splenic abcess.**

Meloidosis is an infection caused by Burkholderia Pseudomallei. It is endemic in South East Asia and Northern Australia. India is now considered endemic for Meliodosis and has highest predicted rate of mortality due to Meliodosis. In India more cases are reported from Western coast, Tamil Nadu, Andhra Pradesh, West Bengal, Jharkhand, Bihar and North Eastern states[1].

Occupational exposures to contaminated soil like farming, manual labour are important risk factors. Males are more affected. Up to 80% of cases are reported in immuno compromised individual. People with Diabetes Mellitus, Alcoholism, Chronic Kidney Disease, Chronic Obstructive Pulmonary Disease and those who on immunosuppressive treatment are at increased risk[2]. Transmission of infection is mainly by inhalation and inoculation. Clinical spectrum ranges from asymptomatic seroconversion to Chronic Infection like Pneumonia, Visceral abscesses, Fulminant sepsis and Death[3].

Case Report

The patient 52-year-old male, manual labour admitted with Fever, Abdominal Pain, Anorexia and Weight Loss of one month duration.There was no Vomiting or Urinary Symptoms. He is diabetic for the past 10 years on oral anti diabetic drugs with poorly controlled Blood Sugar levels. He is a Chronic Smoker and Alcoholic.

Examinations **—** On examination his vitals were stable.He was poorly built and nourished. Chest examination showed Bilateral rhonchi. Abdominal examination revealed Palpable Liver of 2 cm,which was non tender . Spleen was enlarged, 4 cm in size and tender, free fluid was also present. Cardiovascular and Central Nervous system examinations were within normal limits.

Editor's Comment :

- Always have the suspicion of Meliodosis in an immunocompromised patient who presents with Fever, Multiple Abscesses and Pulmonary Symptoms, so that right treatment can be ensured.

Investigation Reports (Table 1) :

ECG and CxR were normal, USG abdomen showed Hypoechoic Lesion of 2-3 cm and mild ascites. Ascitic fluid study was done which showed exudate with high Adenosine deaminase. Sputum AFB was negative, HBsAg was positive, Anti HCV and HIV were negative. In view of high ADA, raised ESR and clinical features possibility of Abdominal Tuberculosis was considered. Category I DOTS started and patient was discharged. After one month, patient reported with persistant Fever, increase in Abdominal pain, Anorexia and Weight loss. On examination he was found to have increase in Ascites and tender splenomegaly. CT scan of abdomen was taken which revealed multiple Splenic Abscesses. CT guided aspiration of the Abscess was done and the material send for Culture and Sensitivity which revealed Burkholderia pseudomallei. Blood Culture was sterile. Patient was started on Injection Ceftazidime 2 gram intravenously 8th hourly for two weeks. Surgery team was consulted and Splenectomy was done. Postoperative period was uneventful[4]. Patient became afebrile and general condition improved. DOTS stopped. He was discharged on Trimethoprim Sulfamethoxazole combination for three months. Patient doing well on follow up.

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Received on : 10/07/2022

Accepted on : 02/11/2022

Table 1 — *Investigation Reports*

Haemoglobin	8.5%
Total Leucocyte Count	11,000 cmm
Polymorphs	55%
Lymphocytes	35%
Eosinopils	10%
Platelet count	1.4 lakhs/cmm
ESR	85mm/hr
RBS	500 mg%
Urine Acetone	NEGATIVE
SGOT	25
SGPT	20 IU/L
ALP	112
S Bil	1.5
S Protein	8.7 g%
S Albumin	3.5 g%
S Globulin	4.5 g%
PT INR	1.2
B Urea	25 mg%
S Creatinine	0.5 mg%
Ascitic Fluid	
– Adenosine Deaminase	104 U/L

Discussion

Meliodosis is now endemic in India, but often the condition goes unrecognised. High index of suspicion clinically and in microbiological evaluation needed for early diagnosis. The causative organism Burkhelderia Pseudomallei is a small gram negative motile aerobic bacillus .It is easily grown in standard culture media. It is a saprophytic organism seen in soil and surface waters. Occupational exposure to wet soil is the most important cause. Males are more affected. Inhalation and inoculation remains the important modes of transmission.

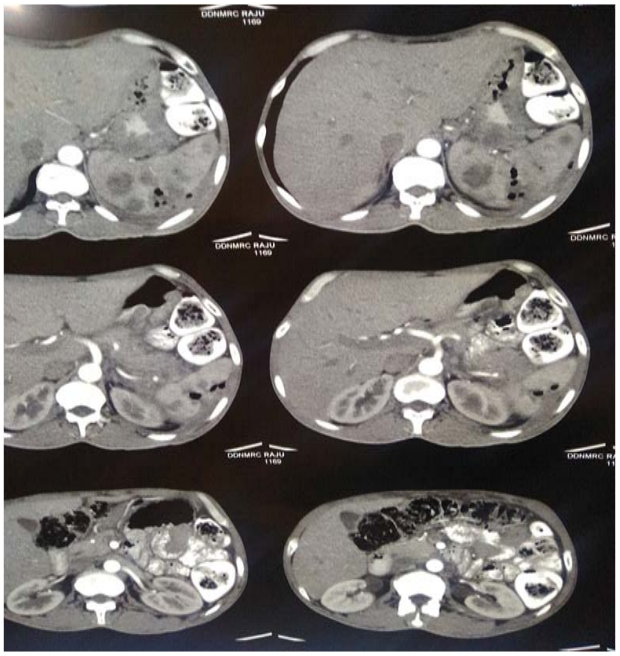

Fig 1 — CT Abdomen

The incubation period may vary from few days to 3-4 weeks depending on the size of inoculum, virulence of the strain and host factors. This patient is diabetic, which is commonest risk factor. He presented with prolonged Fever, Vomiting, Abdominal Distention. These symptoms and raised ADA in ascitic fluid led to the diagnosis of Tuberculosis which is considered as immediate differential diagnosis of Meliodosis.

Though he was put on anti-tubercular treatment DOTS for one month he remained symptomatic with Fever, Anorexia, Weight loss and Abdominal Distention. There was increase in ascites and spleen size. CT abdomen revealed multiple Splenic Abscesses (Fig 1). Aspirate from the abcess revealed gram negative bacilli with typical safety pin appearance.[5] Culture from the aspirate grew dry wrinkled colonies on Blood agar and pinkish rugose colonies on Mac Conkey's agar (Fig 2).

Treatment includes intensive phase of Injection Ceftazidime 2 g I/V Q8H for two weeks and eradication phase of co trimoxazole alone or with doxycycline for three months. Drainage of abcesses and procedures like Splenectomy in selected cases[6] (Fig 3).

Conclusion

High index of suspicion of Meliodosis should be there when an immunocompromised patient presents with fever, Pneumonia, Sepsis and Multiple abscesses.

Because of the diverse clinical presentations, Meliodosis is considered as a great imitator.It is often misdiagnosed as tuberculosis since both infections are endemic in India.

The distinct appearance in culture pattern helps in identifying Meliodosis and differentiating it from other Burkholderia species and Pseudomonas.

Completing the course of antibiotic in intensive phase and eradication phase is important for better outcome.[7]

Acknowledgement

Dr Ponni Krishnan-Gastroenterologist, GH Thiruvananthapuram, Dr Lali Alex Senior Consultant Radiologist, Dr M Renuka Microbiologist, State P H Lab Thiruvananthapuram, Dr Arun Sabu, DNB Trainee Surgery,

Fig 2 — Colonies of Burkhelderia pseudomallei

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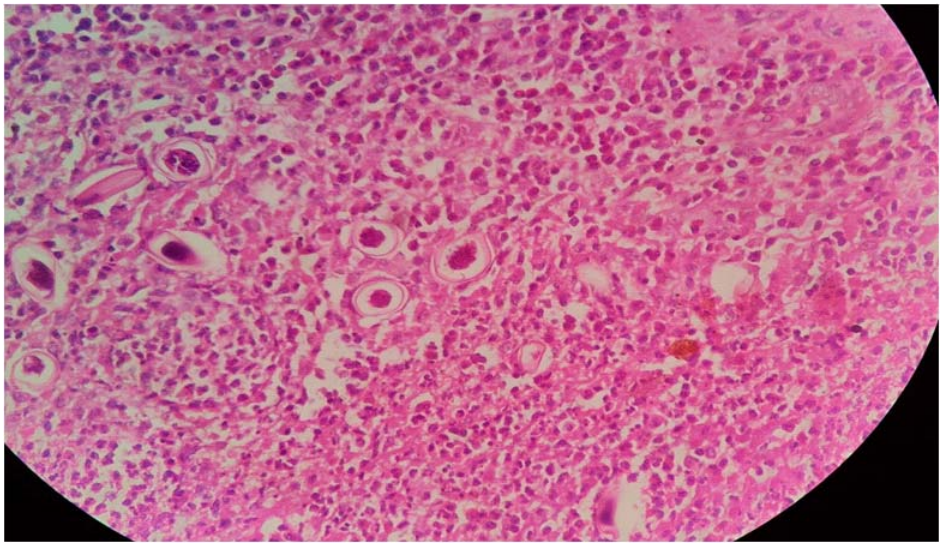

Fig 3 — Histopathology picture of Splenic abscess (H&E X 48)

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