

Melioidosis

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Introduction

Melioidosis is a bacterial infection caused by the Gram negative bacillus *Burkholderia pseudomallei*. Infection results from percutaneous inoculation, inhalation or ingestion. It primarily affects people in regular contact with soil and water¹. We report a child with melioidosis, whose siblings had serologic evidence of exposure to *Burkholderia pseudomallei* suggesting a common source of infection.

Case report

An 11 year old boy from Arachchikattuwa, Puttalam district presented with a history of intermittent fever and abdominal pain of one week duration. Six weeks previously he had been treated with oral metronidazole for right sided cervical lymphadenopathy and intermittent abdominal pain at the District General Hospital of the area. Lymphadenopathy subsided after medication but the abdominal pain persisted and he developed fever again after discharge from the hospital. He was readmitted to the same hospital and was treated for typhoid fever with intravenous cefotaxime, metronidazole and ciprofloxacin. He was well for one week and again developed fever, abdominal pain and cervical lymphadenopathy and was admitted to ward 2, North Colombo Teaching Hospital, Ragama. Clinical examination was unremarkable other than for lymphadenopathy. During his hospital stay he

developed small tender lumps resembling abscesses over his shins. His C-reactive protein was 61 mg/L and the erythrocyte sedimentation rate was 49 mm/hour. Full blood count, liver and renal function tests were within normal limits. Blood picture showed a viral picture with a secondary bacterial infection. Two blood cultures and a urine culture did not yield any growth. Ultrasound scan of the abdomen revealed a hypo-echoic lesion in right lobe of the liver resembling an abscess.

Following consultation with the Consultant Microbiologist serum was sent for melioidosis antibody to the Faculty of Medicine, Colombo. His antibody titre was >10,250 which is strongly suggestive of a diagnosis of melioidosis. On further questioning, it was revealed that the child had been playing in the flood waters of the Deduru Oya one month prior to the onset of the symptoms. He was treated with intravenous ceftazidime for 14 days followed by cotrimoxazole and doxycycline for 20 weeks. His family members were screened for melioidosis and three of his siblings had positive antibody levels of around two to three hundreds but were asymptomatic and his parents were negative for antibody.

Discussion

Burkholderia pseudomallei is an important cause of community acquired sepsis in South East Asia and Northern Australia¹. Although incidence of melioidosis peaks between 40-60 years of age, it is well recognized in children². Melioidosis has been transmitted to infants through breast milk from mothers with mastitis³. In South East Asia suppurative parotitis account for up to 40% of cases of melioidosis in children². Treatment consists of an intensive phase of at least 10 to 14 days of ceftazidime, meropenem or imipenem administered intravenously followed by oral eradication therapy with trimethoprim-sulphamethoxazole and doxycycline for three to six months⁴. Melioidosis is an emerging infection in Sri Lanka which is in the endemic tropical belt but considered a non-endemic country⁵. The first published report of melioidosis in

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Sri Lanka was in 1927 in a European tea broker resident in Sri Lanka⁶. In 1994 it was reported in a tourist returning to Holland from Sri Lanka⁷. In 2005 *Burkholderia pseudomallei* was isolated and confirmed for the first time in a Sri Lankan laboratory from a case of fatal sepsis⁸. Since then melioidosis has been reported sporadically in increasing numbers in Sri Lanka⁵.

It is very likely that melioidosis is under-diagnosed in Sri Lanka. There is an urgent need to increase awareness of this infection among clinicians so that specimens are sent for culture and serology and appropriate treatment initiated early in the course of the infection, in consultation with the clinical microbiologist. Studies to determine the epidemiology of melioidosis in Sri Lanka are required.

References

1. Wiersinga WJ, Currie BJ, Peacock SJ. Melioidosis. Review article. *New England Journal of Medicine* 2012; **367**:1035-44
<http://dx.doi.org/10.1056/NEJMra1204699>
PMid: 22970946
2. Pagnarith Y, Kumar V, Thaipadungpanit J et al. Emergence of paediatric melioidosis in Siem Reap, Cambodia. *American Journal of Tropical Medicine and Hygiene* 2010; **82**:1106-12.
<http://dx.doi.org/10.4269/ajtmh.2010.10-0030>
PMid: 20519608 PMCID: PMC2877419
3. Cheng AC, Currie BJ. Melioidosis: Epidemiology, pathophysiology and management. *Clinical Microbiological Reviews* 2005; **18**:383-416.
<http://dx.doi.org/10.1128/CMR.18.2.383-416.2005>
PMid: 15831829 PMCID: PMC1082802
4. Inglis TJ. The treatment of melioidosis. *Pharmaceuticals* 2010; **3**: 1296-303.
<http://dx.doi.org/10.3390/ph3051296>
PMCID: PMC4033981
5. Corea E, Thevanesam V, Perera S, Inglis TJ et al. Melioidosis in Sri Lanka: an emerging infection. *Sri Lanka Journal of Infectious Diseases* 2012; **1** (2): 2-8.
<http://dx.doi.org/10.4038/sljid.v2i1.3801>
6. Denny CR, Nicholls L. Melioidosis in a European. *Ceylon Journal of Science* 1927; **2**:37-40.
7. Peetermans W E, Van Wjngaerden E, Van Elders J, Verhaege J. Melioidosis brain and lung abscess after travel to Sri Lanka. *Clinical Infectious Diseases* 1999; **28**:921-2.
<http://dx.doi.org/10.1086/517247>
PMid: 10825069
8. Jayasekara K, Perera S, Wijesundere A. Fatal *Burkholderia pseudomallei* septicaemia. *Ceylon Medical Journal* 2006; **51**:69-70.
PMid: 17180814