

**Systemic Melioidosis – uncommon cause of osteomyelitis in a non-endemic region****Vishnu Senthil, Sandesh Madi, Vivek Pandey, Kiran Acharya**

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**Abstract:** Melioidosis being tropical disease caused by soil saprophyte *Burkholderia pseudomallei*. We report a case in a farmer with cardiomyopathy and diabetes mellitus developed septic arthritis and osteomyelitis. Since south India is a non-endemic region for melioidosis, atypical presentation can lead to diagnostic delay and systemic sepsis. Awareness of melioidosis in recent times as aetiology of isolated osteomyelitis in an immune-compromised individual.**Keywords:** Femur osteomyelitis, Melioidosis, Non-endemic region.

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**INTRODUCTION:**

Melioidosis is a fatal disease cause by gram negative bacilli soil transmitted saprophyte *Burkholderia pseudomallei*. India falls in the non endemic zone and after the tsunami in 2004, there has been an increase in reported cases. We report a case of femoral osteomyelitis in a farmer.

**CASE REPORT:**

36 year old farmer from a village in south India presented with fever and swelling of right knee. Acute onset of knee effusion. Known diabetic and with dilated cardiomyopathy. Warmth and tenderness in the distal femur with restricted knee movements. Systemic examination appeared normal. Clinically suspected septic arthritis. Ultrasound revealed effusion. X-ray showed a distal femur lytic lesion [Fig-1]. MRI

revealed knee joint effusion with synovial thickening and altered marrow intensity with post contrast enhancement suggestive of osteomyelitis [Fig-2]. Arthroscopic debridement of knee along with corticotomy and sequestrectomy of distal femur performed, material sent for culture and biopsy. Gram stain and culture showed gram negative bacilli *Burkholderia pseudomallei* sensitive to ceftazidime, Amoxicillin-clavulanic acid, Co-trimoxazole, Imipenam and doxycycline. Patient was started on intensive phase of intravenous ceftazidime for two weeks and eradication phase on Co-trimoxazole for 6 weeks. Patient was kept on non-weight bearing for 3 months and then started on partial weight bearing. Now post op 6 months with latest X-ray showing sclerosis of the distal femur at the corticotomy site [Fig- 3].



**Fig-1: Radiograph of right knee with distal femur anterior-posterior(A) and lateral(B) showing well defined small lytic lesion with narrow zone of transition in distal metaphysis**



**Fig-2: MRI (1.5 Tesla) of femur sagittal T1 Weighted (A) and Coronal T1 Weighted (B) section with post contrast enhancement showing altered marrow signal intensity in the distal shaft of femur along with hyper intensities involving the medial and lateral heads of gastrocnemius, semimembranosus and biceps femoris muscles.**



**Fig-3: Radiograph of right knee with distal femur Lateral(A) and anterior-posterior(B) view at the follow up (6 months) showing sclerosis of cavity with no pathological fracture.**

#### DISCUSSION:

Melioidosis caused by gram negative bacilli, predominately found in soil and water and transmitted through soil and water aerosols. It is a tropical disease with increased incidence in the northern Australia and south-east Asia. Monsoon rains increase its incidence because of its capacity to multiply on surface water bodies and increased dispersion of aerosols with winds. Multi system involvement causing micro-abscess commonly in lung and intra-abdominal organs[1].

Incidence of musculoskeletal involvement is 7%. Mainstay of diagnosis is culture and treatment divided into an intensive phase and eradication phase[2].

India is a non-endemic region, increased incidence of sporadic cases after the tsunami in 2004 with epicentre in Indonesia[3]. High index of suspicion is needed in people presenting with fever whose occupation has increased contact with soil and also migrants from endemic regions. Association with immunosuppressive conditions like diabetic mellitus and dilated cardiomyopathy encourages systemic dissemination of bacteria causing osteomyelitis.

#### CONCLUSION:

Awareness of melioidosis and its presentation in tropical countries like India. Suspecting melioidosis in a farmer with fever and musculoskeletal presentation with immune-suppressive co-morbidities. Intra-operative culture helps to identify the organism and

institute early treatment. Complete course of treatment is needed to prevent relapse.

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