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Cranio-spinal melioidosis – a retrospective analysis of the imaging patterns of cranio-spinal infection with Burkholderia Pesudomallei at a tertiary care center in South India

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Introduction: Burkholderia pseudomallei is a gram negative environmental bacterium found in soil and surface water which causes melioidosis, commonly reported to occur in south-east Asia and northern Australia. It is being increasingly reported in India and transmission is through inhalation, inoculation and ingestion. Two clinical forms are recognised – acute septicemic form and the chronic granulomatous form. Both these forms are recognised to affect the neuraxis and the adjacent soft tissues and bone. Involvement of these structures is rare but of importance due to the significant mortality and morbidity associated with cranio-spinal infection

Methods: 14 culture proven cases with involvement of the cranio-spinal structures were retrospectively identified between Jan 2008 and May 2016 via search of the hospital's electronic database Involvement of the cranio-spinal structures included multiple parenchymal abscesses(5) which usually occurred in contiguity with skull osteomyelitis. Parenchymal and leptomeningeal disease was secondary to septicaemia. Pachymeningeal disease was found to be secondary to sino-nasal involvement and otomastoid infections(5). Acute myelitis (1) and spondylodiscitis (3) were the other forms seen Parenchymal involvement ranged from cerebritis, early and mature parenchymal abscess formation. Patients with fewer abscesses which were amenable to surgical evacuation had a favourable outcome compared to those who had multiple small, widespread abscesses Chronic pachymeningeal disease was invariably associated with sino-nasal, otomastoid infections or a skull osteomyelitis. Multiple cranial neuropathies were recorded in those with pachymeningitis. Local inoculation or inhalation is presumed to be the route of infection One patient who presented with longitudinally extensive transverse myelitis had received immunosuppression prior to admission and this exacerbated the progression of disease 2 patients with parenchymal abscesses and the one with myelitis succumbed to their illness

Conclusion: CNS manifestations of Burkholderia in the form of pachymeningeal disease and myelitis must be suspected in the appropriate clinical scenario as alternative imaging and clinical differentials entail therapy with immunosuppression which are detrimental

Biography

Pavithra Mannam has completed her M.D. in Radio diagnosis from Christian Medical College, Vellore and currently working as an assistant professor of Radiology in Christian Medical College Vellore, India. Her research focuses on Neuroradiology, CNS infections and Diffusion tensor imaging of the brain and spinal cord

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