

## **Diagnostic Challenges of Paediatric Osteomyelitis**

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Early diagnosis and precise localization of osteomyelitis in children are vital for timely intervention and proper management in order to prevent the devastating sequelae of this condition. Early diagnosis can be challenging since early in the development, the signs and symptoms are oftentimes nonspecific. A systematic diagnostic strategy based on sound clinical judgement is vital in meeting the challenges of early diagnosis. This includes: 1) a detailed clinical history and physical examination; 2) key laboratory tests such as ESR, CRP, white cell count; 3) high resolution plain radiographs and 4) appropriate additional imaging modalities to further support the diagnosis such as ultrasound, MRI, scintigraphy and tomography especially for radiographically occult osteomyelitis. The effectiveness of the different imaging modalities in helping diagnose osteomyelitis will be presented. It is also imperative to be able to differentiate osteomyelitis from other conditions that mimics the condition such as medullary tumors, osteoid osteoma and acute trauma.