

Delayed Diagnosis of Thrombosis in Pediatric Osteomyelitis with Methicillin-Resistant Staphylococcus Aureus: A Clinical Challenge

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INTRODUCTION:

Deep vein thrombosis (DVT) is uncommon in children but can arise as a complication of osteomyelitis (OM), particularly in methicillin-resistant *Staphylococcus aureus* (MRSA) infection (1). Liu et al. reported that 5–30% of pediatric patients with MRSA-associated OM develop DVT. We present a case initially diagnosed with femur osteomyelitis, subsequently confirmed to have concurrent DVT.

REPORT:

A 9-year-old girl presented with fever, severe pain, and swelling over her right thigh for one week after hitting a swimming pool ladder. She was unable to bear weight, and examination revealed a swollen, tender thigh. Blood investigations confirmed MRSA bacteremia. A femur X-ray showed periosteal reaction, and ultrasound revealed a long-segment hyperechoic subperiosteal lesion, suggesting acute femur osteomyelitis with a deep-seated collection.

Despite antibiotic therapy, her swelling persisted. Surgical drainage was initially planned; however, concern for DVT prompted a Doppler ultrasound, which confirmed a thrombus extending from the superficial femoral to the popliteal vein. Anticoagulation therapy was initiated alongside antibiotics, leading to significant improvement without surgery.

DISCUSSION:

MRSA osteoarticular infections are aggressive, increasing the risk of deep abscesses, OM, and DVT. MRSA establishes intracellular

persistence through a metabolically dormant phenotype, contributing to more possibilities of infection spread, vascular compromise, and thrombus formation (2). The overlapping symptoms of acute OM with abscess and DVT make diagnosis challenging. While rare, pediatric DVT requires early detection to prevent life-threatening complications such as pulmonary embolism.



Figure 1: Periosteal reaction in femur x-ray

CONCLUSION:

A high index of suspicion is essential when managing pediatric OM caused by MRSA to ensure timely diagnosis and treatment, preventing severe complications.

REFERENCES:

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