

Dreadful Elbow Pain in Pediatric Dengue Fever

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INTRODUCTION:

Dengue, being the commonest arthropod-borne viral infection worldwide, represents significant healthcare burden in Malaysia. Bacterial co-infections are increasingly reported with around 0.18%-7% dengue infection diagnosed with concurrent bacteremia.^[1] Septic arthritis is often a hematogenous infection.^[2] We are reporting a child of dengue infection diagnosed with concurrent staphylococcal bacteremia and septic arthritis with osteomyelitis.

REPORT:

A previously healthy 1-year-old boy presented with fever for 3 days and flushing of erythematous rashes over abdomen and bilateral lower limbs. He was diagnosed as dengue infection based on positive dengue serology. On day 7 of illness, caretaker noticed a painful swelling over his left elbow with persistent fever. Examination revealed body temperature of 39.8 degree celcius with erythematous, warm and tender left elbow swelling. Lytic lesion at condylar surface left humerus was seen on plain radiograph. Blood investigation revealed leucocytosis and elevated C-reactive protein. Thickened synovium with joint effusion and distal humerus metaphyseal erosion in ultrasound left elbow was suggestive of septic arthritis with acute osteomyelitis left humerus. Blood culture taken confirmed *Staphylococcus aureus* bacteremia.

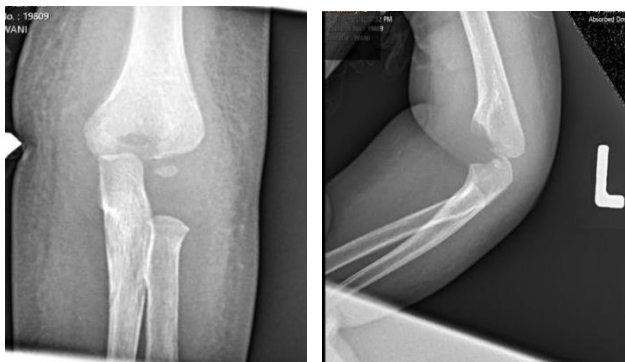


Figure 1: Plain radiograph left elbow

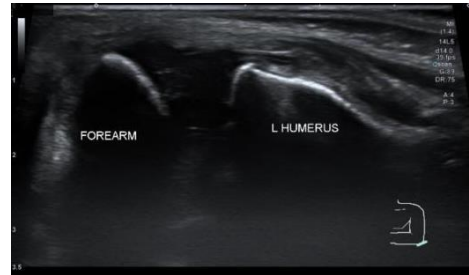


Figure 2: Ultrasound left elbow

Arthrotomy washout of left elbow was done and joint fluid culture confirmed *Staphylococcus aureus*. He was treated with 6 weeks course of antibiotics.

Concurrent bacteremia in dengue infection is possibly due to disintegration of protective endothelial cells by dengue non-structural proteins antibodies with relative immunosuppression allowing bacterial entry into bloodstream.^[1] Sluggish metaphyseal capillaries blood flow and lack of synovial limiting basement membrane increase susceptibility to infection from hematogenous seeding.^{[1][2]}

CONCLUSION:

Concurrent bacteremia in dengue infection requires vigilant detection and treatment to avoid serious complications and mortality.

REFERENCES:

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2. Pääkkönen M, Peltola H. Management of a child with suspected acute septic arthritis. *Archives of disease in childhood*. 2012 Mar 1;97(3):287-92.