

## A Case Report: Acute Salmonella Osteomyelitis In A Healthy Toddler In Malaysia

Nishand G, Wan KL, Zuki Z

*Orthopaedic & Traumatology Department, Sg. Buloh Hospital, Selangor, Malaysia*

### INTRODUCTION:

The most common cause of acute osteomyelitis in paediatric group is Staphylococcus Aureus. Acute salmonella osteomyelitis is commonly associated with sickle cell disease children. We would like to highlight a rare case of acute Salmonella osteomyelitis in a healthy toddler in urban environment, from a middle income family group and good extended family support.

### CASE REPORT

M, a 9-month old boy was admitted for fever, vomiting and diarrhoea. He was treated for acute gastroenteritis and started on intravenous fluid management. Subsequent persistent symptoms prompted a battery of tests, one of which serology for Salmonella returned positive. A week later he developed an increasing swelling of his right shoulder with diminished movement of right upper limb. His right shoulder had erythematous shiny skin, mild amount of fluctuancy and the toddler was apprehensive towards any attempt to move his right shoulder. A deltopectoral approach for right shoulder exploration and drainage was done. Five mL of pus was evacuated from below the deltoid muscle and necrotic tissue tracked into proximal humerus cortex through the breached overlying thick periosteum.

Intra operative culture and sensitivity yielded Salmonella species which was sensitive to ceftriaxone and ciprofloxacin. Intravenous ceftriaxone was continued for eight weeks upon advised by a paediatric infectious diseases consultant. The species was further identified by Institute of Medical Research, Malaysia to be Salmonella paratyphi B. His fever settled three days after pus evacuation. His right shoulder range of motion improved and he was able to prop himself up one week after the operation.

**Figure 1: Xray right shoulder with OM proximal head of humerus**



### DISCUSSIONS:

Paratyphoid fever typically presents with fever, vomiting, severe diarrhoea and distinctive truncal red rashes. It is caused by Salmonella enterica, a Gram negative rod bacteria that ferments glucose with acid and gas as the by-products.

Salmonella paratyphi spreads via faecal-oral route and typically in consumption of contaminated drinking water. Current vaccine for Salmonella typhi only gives partial protection for Salmonella paratyphi B and there is no current widespread usage of paratyphi vaccination being made available.

### CONCLUSION:

This toddler's gastrointestinal symptoms prompted the correct antibiotic choice. Although Staphylococcus aureus remained as the most common cause of acute osteomyelitis in paediatric group, this toddler was unfortunate to contract Salmonella paratyphi type of acute osteomyelitis. The toddler responded well to the treatment. The aetiology of the acute osteomyelitis in children is largely dependent on the cause of the haematogenous spread.

### REFERENCES:

1. Salmonella typhi by David V Pollack