

ANMC Pediatric Acute Hematogenous Septic Arthritis/Osteomyelitis Guideline

Symptoms	Common organisms
Fever Joint warmth, swelling, and/or tenderness Refusal to bear weight or range extremity <ul style="list-style-type: none"> • Pseudo-paralysis in infants Frequency: Knee>hip>ankle>elbow=shoulder *If signs/symptoms present, obtain labs and calculate Kocher score ** Remember, many infections and tumors start with a history of "trauma"	<i>Staphylococcus aureus</i> Beta-hemolytic Streptococci <i>Haemophilus influenza a</i> <i>Kingella kingae</i>

Kocher Criteria for Septic Arthritis	Work-up: Kocher 2 or Higher
<u>Assign 1 point each:</u> <ul style="list-style-type: none"> • Non-weight bearing • Temperature >38.5 C • ESR >40mm/hr (or CRP >2.0 mg/dL) • Peripheral WBC >12,000 cells/mm³ Risk for Score: 1 = 3%, 2 = 40%, 3 = 93%, 4 = 99% *Urgent diagnosis critical to prevent long term joint damage	MUST obtain blood culture prior to antibiotics Joint aspirate as soon as feasible <ul style="list-style-type: none"> • PREFERABLY prior to antibiotics • Culture, gram stain, cell count with diff Plain x-ray MRI with contrast of region of suspicion <u>Consult orthopedics</u> <u>Consult pediatrics</u> <u>Consult pediatric infectious diseases</u>

Medical Therapy	Surgical Treatment
Obtain IV access and blood culture Consult orthopedics and pediatrics IF SEPTIC SHOCK, <i>after</i> blood culture: <ul style="list-style-type: none"> • Normal saline bolus as appropriate (20 mL/kg, max 1000 mL) • Vancomycin 20 mg/kg • Ceftriaxone 100 mg/kg (2g maximum) If hemodynamically stable, HOLD antibiotics until aspirate or surgical cultures obtained	Early drainage of septic joint mandatory in all cases For osteomyelitis, directed sampling/drainage as directed by imaging studies and orthopedic service

Antibiotic Selection			
	Preferred Therapy	Type I PCN allergy	IV to PO Conversion Criteria
Empiric therapy*	Vancomycin dosing per pharmacy (15 mg/kg/dose q6h) PLUS Ceftriaxone 100 mg/kg/day q24h	Vancomycin dosing per pharmacy (15 mg/kg/day q6h) PLUS Gentamicin dosing per pharmacy (5-7.5 mg/kg/day)	<ul style="list-style-type: none"> • Afebrile x48h • CRP <3 mg/dL • Susceptibility of organism reveals adequate oral therapy option • No further surgery planned

Treatment Duration and Follow-up	
Septic Arthritis	Osteomyelitis
<ul style="list-style-type: none"> • At 3 week visit: CBC, ESR, CRP and x-ray • If evidence of osteomyelitis by x-ray or ESR >20 mm/hr or CRP >1 mg/dL, extend therapy to 6 weeks • End of therapy: Stable x-ray, ESR <20mm/hr, CRP <1mg/dL 	<ul style="list-style-type: none"> • At 3 week visit: CBC, ESR, CRP • At 6 week visit: CBC, ESR, CRP and x-ray • End of therapy: Stable x-ray, ESR <20mm/hr, CRP <1mg/dL

Antimicrobial Stewardship Program Approved 2017

*Selected to cover MRSA, MSSA, beta-hemolytic streptococci, Haemophilus influenza a, Kingella, and enteric GNRs