1-2022

Musculoskeletal Infection

Children's Mercy Kansas City

These guidelines do not establish a standard of care to be followed in every case. It is recognized that each case is different and those individuals involved in providing health care are expected to use their judgment in determining what is in the best interests of the patient based on the circumstances existing at the time. It is impossible to anticipate all possible situations that may exist and to prepare guidelines for each. Accordingly, these guidelines should guide care with the understanding that departures from them may be required at times.

Assessment and treatment of suspected musculoskeletal (MSK) infection

Musculoskeletal infections include:
- Septic arthritis
- Osteomyelitis
- Pyomyositis

Signs and symptoms concerning for MSK infection include **one or more**:
- Painful fixed joint (pseudoparalysis)
- Point tenderness over the bony metaphysis
- Hip rests in a position of flexion, abduction, and external rotation
- Fever > 38.0 C (100.4F)
- Limb pain in absence of trauma
- Refusal to bear weight or use an extremity
- Previous health care visit for the same problem
- Chronic infection: infection >6 weeks with/without drainage

Initial evaluation for suspected acute or chronic MSK infection
- History and physical exam
- Plain radiographs of the affected area
- Hip ultrasound if suspected effusion
- CBC with differential
- Blood Culture
- Infection site culture
- Inflammatory markers (CRP and ESR)

If concern for sepsis or necrotizing fasciitis, please refer to:
- Sepsis CPM
- Necrotizing fasciitis

Is the clinical presentation still concerning for MSKI?

No
- Consider alternative diagnosis
- Arrange follow up within 24-48 hours if patient discharged

Yes

Kingella kingae

High index of suspicion:
- Typically 6 months to 4 years of age
- Often indolent course, frequently >3 days of symptoms
- Often well-appearing
- May have preceding viral URI or viral stomatitis infection
- Often attends daycare
- No h/o previous MRSA infection

Diagnosis:
- Joint fluid PCR (preferred)
- Joint fluid culture

- Consult Ortho
- Determine need for MRI
- Discuss with ID regarding antibiotic timing/need
  - Most common **antibiotics** include clindamycin 10 mg/kg/dose every 6 hours OR if suspected ***Kingella kingae,*** cefazolin 50mg/kg/dose every 8 hours

Discharge Considerations
- Is suspicion for MSK infection low?
- Is pain well controlled?
- Is there access to timely follow-up?
- Lack of social factors limiting care?
- Provider comfort for discharge?

If any "No" consider admission.

Can the patient be safely discharged?

No

Is the patient at Adele Hall?

Yes
- Admit to General Pediatrics Inpatient consults for ID and Ortho

No

Yes
- Arrange follow up within 24-48 hours

Can patient be managed at CMH-K per discussion between provider and consultants?

No
- Transfer to Adele Hall campus

Yes
- Admit to Platinum Team Inpatient consults for ID and Ortho

Can Patient be managed at CM-K?
- MRI must be obtained in the Emergency Department PRIOR to admission
- Ortho, Hospitalist, ED and ID attending agree case can be managed at CMH-K
- Transfer to Adele Hall campus if MRI is unavailable or patient requires surgery (typically direct admit)

Acronyms/Abbreviations used in document (laboratory/radiology studies excluded):
CMH-K = Children's Mercy Kansas
ID = Infectious Disease
MRSA = Methicillin-resistant Staphylococcus aureus
MSKI = Musculoskeletal Infection
Ortho = Orthopedics
URI = Upper respiratory infection

Contact: EvidenceBasedPractice @cmh.edu

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