

Septic Arthritis in Adults - Microbiology Summary Clinical Guideline

Reference number: CG-ANTI/2019/066

Clinical concerns re septic arthritis

Consultation with the orthopaedic registrar/consultant on call

Investigation: pre-operative

- Microbiology:
 - Aspirate for MC&S
 - Blood cultures x 2
 - MRSA screen
- Blood sciences:
 - FBC, ESR, CRP, lactate, U&Es, and LFTs
- ± Radiology:
 - Symptoms and signs of septic arthritis may prompt XR, US, or MRI; however, no imaging modality is diagnostic of septic arthritis

Treatment

- Collaborate with the orthopaedic consultant regarding joint washout:
 - If joint washout is contraindicated, consider arthrocentesis/serial needle aspirations
- Empiric, intravenous antibiotics (please note, page 2)

Investigation: intra-operative

- Microbiology:
 - Fluid and/or pus and or tissue for MC&S
- ± Biochemistry:
 - Investigation of synovial fluid inflammatory markers can be considered by the orthopaedic consultant, case by case

Treatment

- Collaborate with the orthopaedic consultant regarding ± joint washout repeat
- Directed, intravenous antibiotics (please note, Microbiology Full Clinical Guideline pages 3-5)
- ± Referral to the UHDB orthopaedic multi-disciplinary meeting (1200-1300 Fridays)

Empiric, intravenous antibiotics: no history of (i) penetrating traumatic injury to the joint, (ii) immunocompromise, or (iii) intravenous drug usage

	No history of MRSA	History of MRSA
First line	Flucloxacillin 2 g 6 hourly	Vancomycin or teicoplanin, dose as per hospital guidelines , vancomycin target pre dose level 15-20 mg/l, teicoplanin target pre dose level 20-40 mg/l
Second line	If non-immediate without systemic involvement penicillin allergy , cefuroxime 1.5 g 8 hourly	Daptomycin 6 mg/kg 24 hourly
Third line	If immediate rapidly evolving or non-immediate with systemic involvement penicillin allergy , vancomycin or teicoplanin, dose as per hospital guidelines , vancomycin target pre dose level 15-20 mg/l, teicoplanin target pre dose level 20-40 mg/l	Linezolid 600 mg 12 hourly (or per oral [absorption 100%])

Empiric, intravenous antibiotics: history of (i) penetrating traumatic injury to the joint, (ii) immunocompromise, or (iii) intravenous drug usage

First line	Piperacillin tazobactam 4.5 g 6 hourly and Vancomycin or teicoplanin, dose as per hospital guidelines , vancomycin target pre dose level 15-20 mg/l, teicoplanin target pre dose level 20-40 mg/l
Second line, if non-immediate without systemic involvement penicillin allergy	Ceftazidime 2 g 8 hourly and Vancomycin or teicoplanin, dose as per hospital guidelines , vancomycin target pre dose level 15-20 mg/l, teicoplanin target pre dose level 20-40 mg/l
Third line, if immediate rapidly evolving or non-immediate with systemic involvement penicillin allergy	Ciprofloxacin 400 mg 8 hourly and Vancomycin or teicoplanin, dose as per hospital guidelines , vancomycin target pre dose level 15-20 mg/l, teicoplanin target pre dose level 20-40 mg/l

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Document control

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