

Management of Infections in Adult Patients

First-Line Antimicrobial Guidelines

BEFORE PRESCRIBING ANY ANTIMICROBIAL, CHECK FOR ALLERGIES, DRUG INTERACTIONS & CONTRAINDICATIONS

Assess each patient thoroughly taking into account:

Ideal Body Weight (IBW) Renal Function Hepatic Function Past Medical History Drug hypersensitivities Recent antibiotic use

Ensure adequate bacteriological samples are taken prior to starting antimicrobial therapy

SEPSIS SYNDROME

ACUTE INFECTION OF UNKNOWN SOURCE WITHOUT RED FLAG SEPSIS (if origin is known please refer to the appropriate site-specific box below):

Cefuroxime* 1.5g 8 hourly IV + metronidazole 500mg 8 hourly IV

*If **severe** penicillin allergic, use vancomycin IV (see Antibiotic Formulary section) + metronidazole 500mg 8 hourly IV + ciprofloxacin 500mg 12 hourly po (400mg 12 hourly IV)

SEVERE SEPSIS (DEFINED AS HAVING AT LEAST 1 RED FLAG):

Meropenem* 2g 8 hourly IV and review in 48-72 hours until isolate and sensitivity known

*If **severe** penicillin allergic, use vancomycin IV (see Antibiotic Formulary section) + metronidazole 500mg 8 hourly IV + ciprofloxacin 500mg 12 hourly po (400mg 12 hourly IV)

NEUTROPENIC SEPSIS:

Meropenem** 1g (or 2g if severe) 8 hourly IV +/- gentamicin 7mg/kg IBW IV at frequency according to Hartford Nomogram (See Antibiotic Formulary)

If **severe penicillin allergic, use vancomycin IV (see Antibiotic Formulary) + ciprofloxacin 400mg 8 hourly IV + metronidazole 500mg 8 hourly IV + gentamicin 7mg/kg IBW IV at frequency according to Hartford Nomogram (See Antibiotic Formulary)

CNS INFECTIONS

Meningitis:

Cefotaxime* 2g 6 hourly IV
or ceftriaxone* 2g 12 hourly IV
Add amoxicillin* if >55yr old 2g 4 hourly IV

*If severe penicillin allergy contact Consultant Microbiologist

Brain abscess:

Meropenem 2g 8 hourly IV + metronidazole 500mg 8 hourly IV + rifampicin 600mg 12 hourly IV (refer to Neurosurgeon)

HSV encephalitis:

Aciclovir 10mg/kg IBW 8 hourly IV

GASTROINTESTINAL INFECTIONS

Biliary sepsis and Cholecystitis:

Cefuroxime* 1.5g 8 hourly IV + metronidazole 500mg 8 hourly IV

* If severely penicillin allergic use ciprofloxacin 400mg 12 hourly IV + metronidazole 500mg 8 hourly IV

Peritonitis:

Co-amoxiclav** 1.2g 8 hourly IV

** If penicillin allergic use cefuroxime 1.5g 8 hourly IV + metronidazole 500mg 8 hourly IV

C. difficile disease:

See algorithm in Antibiotic Formulary

UROSEPSIS

Pyelonephritis:

Co-amoxiclav* 1.2g 8 hourly IV

Epididymo-orchitis:

≤ 35 yr old ceftriaxone * 500mg im stat + doxycycline 100mg 12 hourly po
>35 yr old ciprofloxacin 500mg 12 hourly po

* If penicillin allergic use ciprofloxacin 500mg 12 hourly po

Acute Prostatitis:

Ciprofloxacin 500mg PO (400mg IV) 12 hourly **if not tried in primary care**, otherwise Temocillin** 2g 12 hourly IV

Add Gentamicin 7mg/kg IBW IV stat for acute, severely ill patients with associated sepsis

** If penicillin allergic contact Consultant Microbiologist

SOFT TISSUE INFECTIONS

Cellulitis:

High dose IV flucloxacillin* 2g 6 hourly and then follow algorithm in Antibiotic Formulary

Necrotising fasciitis: URGENT debridement

Meropenem 2g 8 hourly IV + clindamycin 1.2g 6 hourly IV

Surgical wound infections: Co-amoxiclav* 625mg 8 hourly PO. Consider need for additional amoxicillin (see Antibiotic Formulary)

*If penicillin allergic contact Consultant Microbiologist

Ideal Body Weight (IBW) Calculations

Female IBW = 45 + (0.91 x (ht. in cm - 152.4))

Male IBW = 50 + (0.91 x (ht. in cm - 152.4))

If patient < 150cm tall, use IBW = 45kg (females), 50kg (males)

COMMUNITY-ACQUIRED PNEUMONIA

CURB 0-1: Amoxicillin 500mg to 1g 8 hourly PO

* If penicillin allergic use Doxycycline 200mg loading dose on day 1, then 100mg od PO from day 2

CURB 2: Amoxicillin** 500mg - 1g 8 hourly PO + clarithromycin 500mg 12 hourly PO

** If penicillin allergic use doxycycline 100mg 12 hourly PO OR clarithromycin 500mg 12 hourly PO

CURB ≥ 3: Co-amoxiclav*** 1.2g 8 hourly IV + clarithromycin 500mg 12 hourly IV or PO

***If penicillin allergic (rash only) use cefuroxime 1.5g 8 hourly IV + clarithromycin 500mg 12 hourly IV or PO

Severe allergy: Contact Consultant Microbiologist

HOSPITAL-ACQUIRED PNEUMONIA

≤ 5d onset: mild - doxycycline 100mg 12 hourly PO
moderate - co-amoxiclav* 1.2g 8 hourly IV

* If penicillin allergic (rash only) use cefuroxime 1.5g 8 hourly IV

Severe penicillin allergy: Contact Consultant Microbiologist

>5d onset: Ceftazidime 2g 8 hourly IV + metronidazole 500mg 12 hourly IV

Severe penicillin allergy: Contact Consultant Microbiologist

SUSPECTED ENDOCARDITIS (initial blind treatment)

Take 3 sets of blood cultures over an hour and contact Consultant Microbiologist

Native valve:

Indolent - amoxicillin 2g 4 hourly IV

Acute/severe or penicillin allergic - vancomycin (see Antibiotic Formulary) + gentamicin 1mg/kg IBW 12 hourly IV (NOT once daily regimen)

Prosthetic valve:

Vancomycin (See Antibiotic Formulary) + gentamicin 1mg/kg IBW 12 hourly IV (NOT once daily regimen) + rifampicin 600mg 12 hourly IV or PO

BONE & JOINT INFECTIONS

Osteomyelitis: Flucloxacillin* 2g 6 hourly IV
Discuss addition of second agent with Consultant Microbiologist

* If penicillin allergic contact Consultant Microbiologist

Discitis: Ciprofloxacin 500mg 8 hourly PO (or 400mg 8 hourly iv) + rifampicin 600mg 12 hourly PO or IV

Septic Arthritis: Flucloxacillin** 2g 6 hourly IV

** If penicillin allergic use clindamycin 450mg 6 hourly PO

Open Fractures: Flucloxacillin*** 2g 6 hourly IV + metronidazole 500mg 8 hourly IV (+ gentamicin 160mg stat IV if visibly soiled)

***If penicillin allergic use cefuroxime 1.5g 8 hourly IV + metronidazole 500mg 8 hourly IV (+ gentamicin 160mg stat IV if visibly soiled)

A full version of the antimicrobial guidelines is available on the intranet. For further advice please contact Consultant Microbiologist via Switchboard.

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In Line with Path Links Antibiotic Formulary & Prescribing Advice and CMU update on product availability