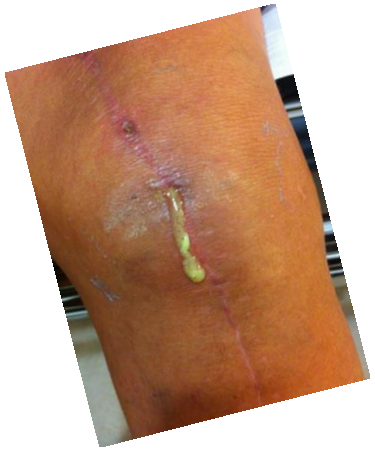
Rappels sur l'antibiothérapie au cours des IOA



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Principes de l'antibiothérapie des IOA

- Est une antibiothérapie de type documentée
- Suppose des prélèvements fiables
- Peut parfois être probabiliste en raison d'une urgence
  - à débuter APRES les prélèvements
  - à adapter le plus rapidement possible (désescalade)
- Pas de prélèvement microbiologique sous antibiotique
- Durée de traitement déterminée à l'avance selon le contexte
- Suivi des patients /observance et tolérance
- Protocoles de services
- Réseau national (CRIOAC) pour les situations complexes relevant d'équipes multidisciplinaires

Infections sur prothèses dans le mois suivant l'implantation

Proposition de traitement antibiotique probabiliste

ATB	Doses
Vancomycine*	1 000 mg IVL en 1 h (1 250 mg en 1 h - 1 h 30 si poids 80-100 kg ; 1 500 mg si poids > 100 kg)/12 h Réaliser un dosage du taux résiduel à la 72e heure si le traitement est poursuivi pour adapter la dose (objectif de taux résiduel à 20-30 mg/L)
Pipéracilline-tazobactam	4 g IVL/8 h (toutes les 6 h si poids >100 kg)
Cefotaxime	2 g IVL/8 h (3 g/8 h si poids 70-100 kg ; 3 g/6 h si poids > 100 kg)
Ceftriaxone	2 g IVL/24 h (1,5 g/12 h si poids 70-100 kg ; 2 g/12 h si poids > 100 kg)

* Le schéma thérapeutique proposé pour l'administration de vancomycine (produit veinotoxique) pourra être modifié en fonction des pratiques locales.
En particulier, l'utilisation d'une perfusion continue (pousse-seringue électrique) après une dose de charge de vancomycine est pratiquée par certaines équipes.

Proposition de traitement antibiotique selon le micro-organisme retrouvé

	Traitement initial	Relais oral exclusif[1]
Staphylocoques multisensibles[2]		
Poids ≤ 70 kg	Oxacilline ou cloxacilline[3] IV 1,5 g/4 h **OU** Cefazoline[4] 1 g/6 h IV	Ofloxacine[5,6,7] à la dose de 200 mg 2x/j **ET** rifampicine[8,9] 900 mg 1x/j
Poids > 70 kg	Oxacilline ou cloxacilline3 IV 2 g/4 h **OU** Cefazoline[4] 2 g/8 h IV	Ofloxacine[5,6,7] à la dose de 200 mg 3x/j **ET** rifampicine[8,9] 600 mg 2x/j
Entérobactéries sensibles[10]		
Poids ≤ 70 kg	Cefotaxime 2 g/8 h IV **OU** Ceftriaxone 2 g/24 h IV	Ofloxacine[5,6] à la dose de 200 mg 2x/j **OU** ciprofloxacine[6] 500 mg 2x/j
Poids > 70 kg	Cefotaxime 9 à 12 g/j IV en 3 à 6 injections **OU** Ceftriaxone 1,5 à 2 g/12 h IV	Ofloxacine[5,6] à la dose de 200 mg x3/j **OU** ciprofloxacine[6] 750 mg 2x/j

Y a-t-il un dosage optimal pour la Rifampicine dans le traitement des IPOAs?

- French guidelines ➡ 10mg/kg/12h IV puis switch oral
- IDSA guidelines ➡ 600mg DUJ ou 300-450 mg /12h PO

Références	DJ (mg)	Fréquence d'administration	Débuté PO
Zimmerli W *et al.* JAMA 1998	900	2/j	O
Barberan *et al.* J Am J Med 2006	600	1/J	O
Helou El OC *et al.* Eur J Clin Microbiol Infect Dis 2010	900	2 à 3/ j	O
Peel TN *et al.* Antimicrob Agents Chemother 2013	600	2	O
Vilchez F *et al.* Clin Microbiol Infect 2011	600	1/j	O
Senneville E *et al.* Clin Infect Dis 2011	20/kg	2/j	N
Byren I *et al.* J of Antimicrob Chemother 2009	600	2/j	O
Lora-Tamayo J *et al.* Clin Infect Dis 2013	600	1/j	O/N

Proposition de traitement antibiotique selon le micro-organisme retrouvé

	Traitement initial	Relais oral exclusif[1]
Streptocoques (sauf entérocoques)		
Si poids ≤ 70 kg	Amoxicilline 1,5 g/4 h IV **OU** ceftriaxone[2,3] 2 g/24 h IV	Clindamycine[4] 600 mg x3/j **OU** amoxicilline[5] 2 g 3x/j
Si poids > 70 kg	Amoxicilline 2 g/4 h IV **OU** ceftriaxone[2,3] 1,5 à 2 g/12 h IV	Clindamycine[4] 600 mgx4/j **OU** amoxicilline[5] 3 g 3x/j

Antibiothérapie per-opératoire probabiliste

- Dans le CRIOGO
  - Poitiers : C3G + Vanco
  - Rennes : Pip- Tazo + Vancomycine ou Pip- Tazo + Linézolide
  - Nantes : Pip- Tazo + Linézolide
  - Tours : Pip- Tazo + Vancomycine
  - Angers : Pip- Tazo + Vancomycine
- Et ailleurs
  - Lyon : Céfepime + Vancomycine
  - Nancy :C3G + Vanco ou Pip- Tazo + Vancomycine

Place des nouvelles molécules ?

- Daptomycine : 10-12 mg/kg/j en une PIV ou IVD (3mn) C3G ou Pip- Tazo
- Ceftobiprole : 500mg/8H (pouvant être adaptée à 1g /8H selon cas particuliers)
- Ceftaroline ?

IDSA 2013

Table 2. Intravenous or Highly Bioavailable Oral Antimicrobial Treatment of Common Microorganisms Causing Prosthetic Joint Infection (B-III Unless Otherwise Stated in Text)

Microorganism	Preferred Treatment[a]	Alternative Treatment[a]	Comments
Staphylococci, oxacillin-susceptible	Nafcillin[b] sodium 1.5–2 g IV q4-6 h or Cefazolin 1–2 g IV q8 h or Ceftriaxone[c] 1–2 g IV q24 h	Vancomycin IV 15 mg/kg q12 h or Daptomycin 6 mg/kg IV q 24 h or Linezolid 600 mg PO/IV every 12 h	See recommended use of rifampin as a companion drug for rifampin-susceptible PJI treated with debridement and retention or 1-stage exchange in text
Staphylococci, oxacillin-resistant	Vancomycin[d] IV 15 mg/kg q12 h	Daptomycin 6 mg/kg IV q24 h or Linezolid 600 mg PO/IV q12 h	See recommended use of rifampin as a companion drug for rifampin-susceptible PJI treated with debridement and retention or 1-stage exchange in text
Enterococcus spp, penicillin-susceptible	Penicillin G 20–24 million units IV q24 h continuously or in 6 divided doses or Ampicillin sodium 12 g IV q24 h continuously or in 6 divided doses	Vancomycin 15 mg/kg IV q12 h or Daptomycin 6 mg/kg IV q24 h or Linezolid 600 mg PO or IV q12 h	4–6 wk. Aminoglycoside optional Vancomycin should be used only in case of penicillin allergy
Enterococcus spp, penicillin-resistant	Vancomycin 15 mg/kg IV q12 h	Linezolid 600 mg PO or IV q12 h or Daptomycin 6 mg IV q24 h	4–6 wk. Addition of aminoglycoside optional
Pseudomonas aeruginosa	Cefepime 2 g IV q12 h or Meropenem[e] 1 g IV q8 h	Ciprofloxacin 750 mg PO bid or 400 mg IV q12 h or Ceftazidime 2 g IV q8 h	4–6 wk Addition of aminoglycoside optional Use of 2 active drugs could be considered based on clinical circumstance of patient. If aminoglycoside in spacer, and organism aminoglycoside susceptible than double coverage being provided with recommended IV or oral monotherapy
Enterobacter spp	Cefepime 2 g IV q12 h or Ertapenem 1 g IV q24 h	Ciprofloxacin 750 mg PO or 400 mg IV q12 h	4–6 wk.
Enterobacteriaceae	IV β-lactam based on in vitro susceptibilities or Ciprofloxacin 750 mg PO bid		4–6 wk
β-hemolytic streptococci	Penicillin G 20–24 million units IV q24 h continuously or in 6 divided doses or Ceftriaxone 2 g IV q24 h	Vancomycin 15 mg/kg IV q12 h	4–6 wk Vancomycin only in case of allergy

Modalités d'administration

- La durée optimale des ATB IV comprise entre 5 jours et 6 semaines en fonction des micro-organismes retrouvés et du terrain.
- Des **hémocultures positives** nécessiteraient une antibiothérapie **IV d'au moins 7 jours.**
- Il est recommandé de traiter **entre 6 semaines et 3 mois.**
- Il n'est **pas** recommandé de prolonger le traitement **au-delà de 3 mois**.
- Il n'y a pas de place pour le dosage d'antibiotique dans les situations simples (hors aminosides ou vancomycine).

Pied Diabétique

Recommandations 2011 du Groupe International de Travail sur le Pied Diabétique (IWGDF) : ?????

2012 Infectious Diseases Society of America Clinical Practice Guideline for the Diagnosis and Treatment of Diabetic Foot Infections[a]

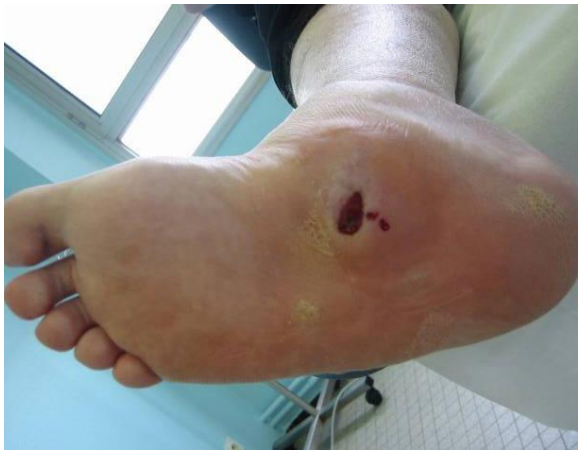


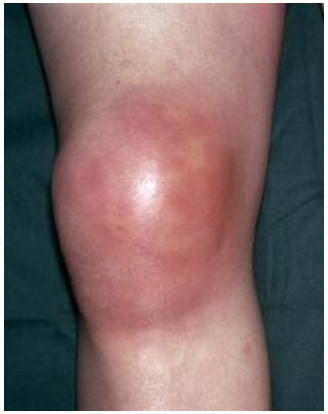
Table 8. Suggested Empiric Antibiotic Regimens Based on Clinical Severity for Diabetic Foot Infections[a]

Infection Severity	Probable Pathogen(s)	Antibiotic Agent	Comments
Mild (usually treated with oral agent[s])	*Staphylococcus aureus* (MSSA); Streptococcus spp	Dicloxacillin	Requires QID dosing; narrow-spectrum; inexpensive
		Clindamycin[b]	Usually active against community-associated MRSA, but check macrolide sensitivity and consider ordering a "D-test" before using for MRSA. Inhibits protein synthesis of some bacterial toxins
		Cephalexin[b]	Requires QID dosing; inexpensive
		Levofloxacin[b]	Once-daily dosing; suboptimal against *S. aureus*
		Amoxicillin-clavulanate[b]	Relatively broad-spectrum oral agent that includes anaerobic coverage
	Methicillin-resistant *S. aureus* (MRSA)	Doxycycline	Active against many MRSA & some gram-negatives; uncertain against streptococcus species
		Trimethoprim/ sulfamethoxazole	Active against many MRSA & some gram-negatives; uncertain activity against streptococci
Moderate (may be treated with oral or initial parenteral agent[s]) or severe (usually treated with parenteral agent[s])	MSSA; *Streptococcus* spp; Enterobacteriaceae; obligate anaerobes	Levofloxacin[b]	Once-daily dosing; suboptimal against *S. aureus*
		Cefoxitin[b]	Second-generation cephalosporin with anaerobic coverage
		Ceftriaxone	Once-daily dosing, third-generation cephalosporin
		Ampicillin-sulbactam[b]	Adequate if low suspicion of *P. aeruginosa*
		Moxifloxacin[b]	Once-daily oral dosing. Relatively broad-spectrum, including most obligate anaerobic organisms
		Ertapenem[b]	Once-daily dosing. Relatively broad-spectrum including anaerobes, but not active against *P. aeruginosa*
		Tigecycline[b]	Active against MRSA. Spectrum may be excessively broad. High rates of nausea and vomiting and increased mortality warning. Nonequivalent to ertapenem + vancomycin in 1 randomized clinical trial
		Levofloxacin[b] or ciprofloxacin[b] with clindamycin[b]	Limited evidence supporting clindamycin for severe *S. aureus* infections; PO & IV formulations for both drugs
		Imipenem-cilastatin[b]	Very broad-spectrum (but not against MRSA); use only when this is required. Consider when ESBL-producing pathogens suspected

	MRSA	*Linezolid*[b]	Expensive; increased risk of toxicities when used >2 wk
		Daptomycin[b]	Once-daily dosing. Requires serial monitoring of CPK
		Vancomycin[b]	Vancomycin MICs for MRSA are gradually increasing
	Pseudomonas aeruginosa	***Piperacillin-tazobactam***[b]	TID/QID dosing. Useful for broad-spectrum coverage. *P. aeruginosa* is an uncommon pathogen in diabetic foot infections except in special circumstances (2)

Table 11. Suggested Route, Setting, and Duration of Antibiotic Therapy, by Clinical Syndrome

Site of Infection, by Severity or Extent	Route of Administration	Setting	Duration of Therapy
Soft-tissue only			
Mild	Topical or oral	Outpatient	1–2 wk; may extend up to 4 wk if slow to resolve
Moderate	Oral (or initial parenteral)	Outpatient/ inpatient	1–3 wk
Severe	Initial parenteral, switch to oral when possible	Inpatient, then outpatient	2–4 wk
Bone or joint			
No residual infected tissue (eg, postamputation)	Parenteral or oral	…	2–5 d
Residual infected soft tissue (but not bone)	Parenteral or oral	…	1–3 wk
Residual infected (but viable) bone	Initial parenteral, then consider oral switch	…	4–6 wk
No surgery, or residual dead bone postoperatively	Initial parenteral, then consider oral switch	…	≥3 mo



Arthrites Septiques

Standard
Amoxicilline + acide clavulanique
2,2 g i.v. 4-6x/j
plus
Aminoglycoside
(par exemple gentamycine 3-5 mg/kg i.v. 1x/jour)

Allergie à la pénicilline
Remplacer amoxicilline + acide clavulanique par :
clindamycine 450-600 mg i.v. 4x/j
ou
vancomycine 1 g i.v. 2x/jour

Prévalence MRSA ≥ 10%
Remplacer amoxicilline + acide clavulanique par :
vancomycine 1g i.v. 2x/jour

Revue Médicale Suisse – www.revmed.ch **–** 13 octobre 2010

Summary of UK recommendations for initial empirical antibiotic choice in suspected septic arthritis

Patient group	Antibiotic choice
No risk factors for atypical organisms.	Flucloxacillin 2 g q.i.d. i.v. Local policy may be to add fusidic acid 500 mg t.i.d p.o., or gentamicin i.v. If penicillin allergic, Clindamycin 450–600 mg q.i.d., or 2nd or 3rd generation cephalosporin.
High risk of Gram-negative sepsis (elderly, frail, recurrent UTI, recent abdominal surgery).	2nd or 3rd generation cephalosporin e.g. cefuroxime 1.5 g t.i.d. Local policy may be to add flucloxacillin. Discuss allergic patients with microbiology – Gram stain may influence antibiotic choice.
MRSA risk (known MRSA, recent inpatient, nursing home resident, leg ulcers or catheters, or other risk factors determined locally).	Vancomycin and 2nd or 3rd generation cephalosporin.
Suspected gonococcus or meningococcus.	Ceftriaxone, or similar dependent on local policy or resistance.
Intravenous drug users	Discuss with microbiologist.
ITU patients, known colonization of other organs (e.g. cystic fibrosis)	Discuss with microbiologist.

Antibiotic choice will need to be modified in the light of results of Gram stain and culture. It should also be reviewed locally by microbiology departments. ITU, intensive therapy unit; MRSA, methicillin-resistant *S. aureus*; p.o., orally; q.i.d., four times daily; t.i.d., three times daily; UTI, urinary tract infection. Reproduced with permission from [20].

Coakley G, Mathews CJ, Field M, *et al.* BSR & BHPR, BOA, RCGP and BSAC guidelines for the management of the hot swollen joint in adults. Rheumatology (Oxford) 2006; 45:1039–1041.

Empiric therapy for septic arthritis

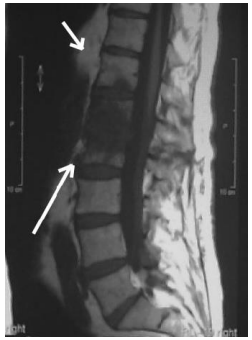
Gram stain	**Antimicrobial** (Dose adjust for renal function)
Gram-positive cocci	Vancomycin 15–20 mg/kg (actual body weight) administered IV q 8–12 h
Gram-negative cocci (concern for *Neisseria*)	Ceftriaxone 1 g IV q 24 h + azithromycin 1 g PO x 1 (or doxycycline 100 mg PO BID× 7 days)
Gram-negative rods	Ceftazidime 2 grams IV q 8 h, cefepime 2 grams IV q 8–12 h, piperacillin/tazobactam 4.5 g IV q 6 h, or a carbapenem (imipenem 500 mg IV q 6 h, meropenem 1 g IV q 8 h, doripenem 500 mg IV q 8 h)
	B-lactam allergy:
	Aztreonam 2 g IV q 8 h or fluoroquinolone (ciprofloxacin 400 mg IV q 12 h or levofloxacin 750 mg IV q 24 h)
Gram-stain negative	Concern for STD associated: ceftriaxone 1 g IV q 24 h + azithromycin 1 g PO× 1 day (or doxycycline 100 mg PO BID× 7 days)
	No STD risk:
	Vancomycin 15–20 mg/kg IV q 8–12 h + ceftriaxone 1 g IV q 24 h or vancomycin 15–20 mg/kg IV q 8–12 h plus cefepime 2 g IV q 8–12 h (for elderly, immunocompromised, healthcare-associated)

Sharff KA, Richards EP, Townes JM.
Curr Rheumatol Rep. 2013 Jun;15(6):332

Spondylodiscites

Micro-organisme	Traitement initial	Autres propositions	Traitement d'entretien
SASM SCNMS	Pénicilline M + AG ou Céfazoline + AG ou Péni M + RF	FQ + RF ou lLincosamides (si éry-S) ou pristinamycine (si éry-S) + RF ou FQ[a] ou FQ + acide fusidique[b]	Idem
SARM SCNMR	Vancomycine ± acide fusidique ou RF	Céfotaxime + fosfomycine ou clindamycine (si éry-S) ou fosfomycine + RF/ acide fusidique[b] ou téicoplanine + fosfomycine/RF[b]	Rifampicine + acide fusidique ou cotrimoxazole ou pristinamycine (Si éry-S) ou glycopeptide[a]
Enterococcus	Amoxicilline + AG (sauf résistance de haut niveau)	Vancomycine ou téicoplanine + AG (sauf résistance de haut niveau)[1]	Amoxicilline (ou selon les résultats bactériologiques)
Streptococcus spp *S. pneumoniae*	Amoxicilline	Clindamycine ou C3G	Clindamycine ou amoxicilline
Bacilles à Gram - (sauf *Pseudomonas*) Cocci à Gram -	C3G + AG C3G + FQ	FQ + fosfomycine ou AG (prudence si micro-organisme Nal-R)[a] ou imipénème + AG/FQ[b]	FQ
Pseudomonas aeruginosa	Ceftazidime + tobra/amika ou aztréonam ou ceftazidime + ciprofloxacine	Ceftazidime + fosfomycine[a] ou imipénème + fosfomycine ou imipénème + ciprofloxacine ou tobra/amika[a]	Ciprofloxacine
Anaérobies	Clindamycine	Imipénème[b] ou céphamycine (céfoxitine, céfotétan[b]) ou imidazolé (sauf *Propionibacterium acnes)*	Clindamycine ou imidazolé (sauf *Propionibacterium acnes)*

Recommandations SPILF 2007



Spondylodiscites

- 2015 Infectious Diseases Society of America(IDSA) Clinical Practice Guidelines for the Diagnosis and Treatment of Native Vertebral Osteomyelitis in Adults

Table 2. Parenteral Antimicrobial Treatment of Common Microorganisms Causing Native Vertebral Osteomyelitis

Microorganism	First Choice[a]	Alternatives[a]	Comments[b]
Staphylococci, oxacillin susceptible	Nafcillin[c] sodium or oxacillin 1.5–2 g IV q4–6 h or continuous infusion or Cefazolin 1–2 g IV q8 h or Ceftriaxone 2 g IV q24 h	Vancomycin IV 15–20 mg/kg q12 h[d] or daptomycin 6–8 mg/kg IV q24 h or linezolid 600 mg PO/IV q12 h or levofloxacin 500–750 mg PO q24 h and rifampin PO 600 mg daily [122] or clindamycin IV 600–900 mg q8 h	6 wk duration
Staphylococci, oxacillin resistant [123]	Vancomycin IV 15–20 mg/kg q12 h (consider loading dose, monitor serum levels)	Daptomycin 6–8 mg/kg IV q24 h or linezolid 600 mg PO/IV q12 h or levofloxacin PO 500–750 mg PO q24 h and rifampin PO 600 mg daily [122]	6 wk duration
Enterococcus species, penicillin susceptible	Penicillin G 20–24 million units IV q24 h continuously or in 6 divided doses; or ampicillin sodium 12 g IV q24 h continuously or in 6 divided doses	Vancomycin 15–20 mg/kg IV q12 h (consider loading dose, monitor serum levels) or daptomycin 6 mg/kg IV q24 h or linezolid 600 mg PO or IV q12 h	Recommend the addition of 4–6 wk of aminoglycoside therapy in patients with infective endocarditis. In patients with BSI, physicians may opt for a shorter duration of therapy. Optional for other patients [124, 125]. Vancomycin should be used only in case of penicillin allergy.

Enterococcus species, penicillin resistant[e]	Vancomycin IV 15–20 mg/kg q12 h (consider loading dose, monitor serum levels)	Daptomycin 6 mg/kg IV q24 h or linezolid 600 mg PO or IV q12 h	Recommend the addition of 4–6 wk of aminoglycoside therapy in patients with infective endocarditis. In patients with BSI, physicians may opt for a shorter duration of aminoglycoside. The additional of aminoglycoside is optional for other patients [124, 125].
Pseudomonas aeruginosa	Cefepime 2 g IV q8–12 h or meropenem 1 g IV q8 h or doripenem 500 mg IV q8 h	Ciprofloxacin 750 mg PO q12 h (or 400 mg IV q8 h) or aztreonam 2 g IV q8 h for severe penicillin allergy and quinolone-resistant strains or ceftazidime 2 g IV q8 h	6 wk duration Double coverage may be considered (ie, β-lactam and ciprofloxacin or β-lactam and an aminoglycoside).
Enterobacteriaceae	Cefepime 2 g IV q12 h or ertapenem 1 g IV q24 h	Ciprofloxacin 500–750 mg PO q12 h or 400 mg IV q12 hours	6 wk duration
β-hemolytic streptococci	Penicillin G 20–24 million units IV q24 h continuously or in 6 divided doses or ceftriaxone 2 g IV q24 h	Vancomycin IV 15–20 mg/kg q12 h (consider loading dose, monitor serum levels)	6 wk duration Vancomycin only in case of allergy.
Propionibacterium acnes	Penicillin G 20 million units IV q24 h continuously or in 6 divided doses or ceftriaxone 2 g IV q24 h	Clindamycin 600–900 mg IV q8 h or vancomycin IV 15–20 mg/kg q12 h (consider loading dose, monitor serum levels)	6 wk duration Vancomycin only in case of allergy.
Salmonella species	Ciprofloxacin PO 500 mg q12 h or IV 400 mg q12 h	Ceftriaxone 2 g IV q24 h (if nalidixic acid resistant)	6–8 wk duration

Table 3. Selected Oral Antibacterial Agents With Excellent Oral Bioavailability Commonly Used to Treat Patients With Native Vertebral Osteomyelitis

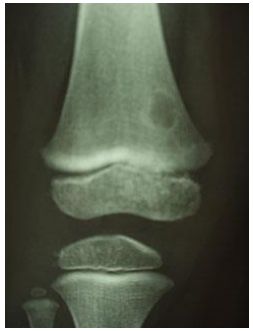
Oral Agents	Comments
Metronidazole 500 mg PO tid to qid	Can be used in the intital course of NVO due to *Bacteroides* species and other susceptible anaerobes.
Moxifloxacin 400 mg PO once daily	Is not recommended for use in patients with staphylococcal NVO, but may be used in patients with NVO due to Enterobacteriaceae and other susceptible aerobic gram-negative organisms.
Linezolid 600 mg PO bid	Can be used in the intital course of NVO due to oxacillin-resistant staphylocci when first-line agents cannot be used.
Levofloxacin 500–750 mg PO once daily	Is not recommended for use in patients with staphylococcal NVO as monotherapy but may be used in patients with NVO due to Enterobacteriaceae and other susceptible aerobic gram-negative organisms.
Ciprofloxacin 500–750 mg PO bid	Is not recommended for use in patients with staphylococcal NVO but may be used in patients with NVO due to Enterobacteriaceae and other susceptible aerobic gram-negative organisms including *Pseudomonas aeruginosa* and *Salmonella* species.
TMX-SMX 1–2 double strength tabs PO bid	Is not recommended for use in patients with staphylococcal NVO but may be recommended as a second-line agent in patients with NVO due to Enterobacteriaceae and other susceptible aerobic gram-negative organisms. May need to monitor sulfamethoxazole levels.
Clindamycin 300–450 mg PO qid	Recommended as second-line choice for sensitive staphylococcal NVO.
Doxycycline and rifampin	Mostly used in patients with brucellar NVO.

Étude DTS

	6-week regimen (n=176)	12-week regimen (n=175)	Total (n=351)	p value
Treatment duration, weeks	6 (6–6·6)	12·1 (12–13)	9·3 (6–12·1)	..
Oral fluoroquinolone and rifampicin	76 (43%)	79 (45%)	155 (44%)	0·793
Other combinations				..
Rifampicin and aminoglycoside	22 (13%)	25 (14%)	47 (13%)	..
Rifampicin and amoxicillin	3 (2%)	4 (2%)	7 (2%)	..
Fluoroquinolone and aminoglycoside	14 (8%)	11 (6%)	25 (7%)	..
Fluoroquinolone and meticillin	4 (2%)	3 (2%)	7 (2%)	..
Fluoroquinolone and cephalosporin	6 (3%)	6 (3%)	12 (3%)	..
Amoxicillin and aminoglycoside	15 (9%)	17 (10%)	32 (9%)	..
Cephalosporin and aminoglycoside	4 (2%)	3 (2%)	7 (2%)	..
Meticillin and aminoglycoside	2 (1%)	0	2 (1%)	..
Other	30 (17%)	27 (15%)	57 (16%)	..
Intravenous treatment duration, weeks	15 (7·0–28·0)	14 (6·5–26·5)	14 (7·0–27)	0·579

Data are median (IQR) or number (%) unless otherwise specified.

Bernard L *et al*. Lancet 2015



Ostéomyélite de l'enfant

DCMC ACUTE HEMATOGENOUS OSTEOMYELITIS ANTIBIOTIC DOSING AND RECOMMENDATIONS

EMPIRIC ANTIBIOTIC THERAPY		
Age < 3 years Potential pathogens: *S. aureus* *S. pyogenes* *S. pneumoniae* *Kingella kingae*	Clindamycin 40 mg/kg/day IV divided every 6 hours	Maximum dose: 600 mg/dose, 2400 mg/day May consider every 8 hour dosing for home therapy only Recommended monitoring: CBC
	Ceftriaxone 100 mg/kg/day IV every 24 hours	Maximum dose: 2000 mg/dose, 4000 mg/day May consider 100 mg/kg/day IV divided every 12 hours for patients > 20 kg or those requiring >2000 mg/dose Recommended monitoring: CBC +/- CMP
Age ≥ 3 years Potential pathogens: *S. aureus* *S. pyogenes*	Clindamycin 40 mg/kg/day IV divided every 6 hours	See above 900 mg/dose, 2700 mg/day reserved for patients with severe disease and/or patients that are obese

FOCUSED ANTIBIOTIC THERAPY		
MSSA *Intravenous Therapy*	Oxacillin 200 mg/kg/day IV divided every 4 to 6 hours *(consider continuous infusion)*	Maximum dose: 2000 mg/dose, 12 gram/day May consider continuous infusion for home therapy Recommended monitoring: CBC & CMP
MSSA *Oral Therapy*	Cephalexin 150 mg/kg/day PO divided every 6 hours	Maximum dose: 1000 mg/dose, 4000 mg/day Renal dosage adjustment if CrCl < 10 mL/min May consider every 8 hour dosing for home therapy only Recommended monitoring: CBC +/- CMP
Kingella kingae *Intravenous Therapy*	Ceftriaxone 100 mg/kg/day IV every 24 hours	See above
Kingella kingae *Oral Therapy*	Amoxicillin/clavulanate 90 mg/kg/day PO divided every 12 hours *(dosed based on amoxicillin component)*	Maximum dose: 4000 mg amoxicillin component/day Renal dosage adjustment if CrCl < 30 mL/min Recommend monitoring: CBC & CMP

Antibiotic treatment for acute haematogenous osteomyelitis of childhood: Moving towards shorter courses and oral administration M. Pääkkönen H. Peltola Int J Antimicrob Agent 2011 Oct;38(4):273-80.

Modalités d'administration des ATB dans les IOA

molécules	posologies	Rythme et voie d'administration
amoxicilline	100 à 200 mg/kg/j	4 à 6 fois/j
cloxacilline	100 à 200 mg/kg/j	4 à 6 fois/j
cefotaxime	100 à 150 mg/kg/j	3 fois/j
ceftazidime	100 mg/kg/j	En 3 fois/j ou continue
imipenem	2 à 3g/j	En 4 fois/j
Ofloxacine	400-600 mg/j	IV = PO en 2 ou 3 fois
levofloxacine	500-750 mg/j	IV=PO en 1 fois/j
ciprofloxacine	1000 à 1500 mg/j si PO 800 à 1200 mg/j si IV	IV = PO en 2 fois/j
rifampicine	20 mg/kg/j ss dépasser 1800 mg/j	IV = PO en 2 fois à jeun
clindamycine	1800 à 2400 mg/j	IV = PO en 3 fois/j
Acide fucidique	1500 mg/j	IV = PO en 3 fois
Cotrimoxazole	3200/640 mg/j	IV en 3 fois
vancomycine	15 mg/kg en dose de charge puis 20-30 mg/kg en PSE	Continue ou discontinue
Teicoplanine	12 mg/kg 2 fois/j , 5 injections puis 12 mg/kg/j	1 fois/j
linezolide	1200 mg/j	IV = PO 2 fois
Daptomycine	8 à 10 mg/kg/j	1 fois/j