

GUIDANCE FOR ORTHOPAEDIC IMPLANT ASSOCIATED INFECTIONS AND SEPTIC ARTHRITIS

- All suggested regimes should be tailored as per sensitivities and should be prescribed after consideration of co-morbidities and potential hypersensitivity, adverse effects and interactions.
- For unusual pathogens or previous resistant organism, discussion with Tay.bjimd@nhs.scot. If out of hours discuss with duty microbiologist
- For OPAT referral please use referral guidance and email both Tay.id@nhs.scot and Tay.immohpat@nhs.scot. Referrals may take up to 72 hours to be actioned.
- NB: The following information is applicable in circumstances where the causative organism is unknown prior to surgical management. In cases where the causative organism is known (e.g. from blood cultures or a joint aspirate prior to surgery) then the antibiotic regimen given post op must be reflective of this.
- Where penicillin allergy is documented, assess patient for suitability for penicillin allergy de-labelling (PADL) as per [guidelines](#)

PROSTHETIC JOINT INFECTIONS

In culture negative prosthetic joint infections where clinical assessment justifies treatment follow guidance below

Intervention	Initial Empirical treatment (initial 48 hours post op)*	Treatment beyond 48 hours	Total duration of treatment (IV + PO)	Minimum duration of IV antibiotics post-op (NB: does not include treatment for MSSA bacteraemia's)	Ongoing treatment and IVOST/discharge options
Debridement, Antibiotics & Implant Retention (DAIR)	IV Vancomycin (calculator) +	Rationalise antibiotics based on cultures if available. In most cases micro results will be available within 48 hours. If NO pathogenic growth at 48 hours, stop gentamicin and continue vancomycin. Treatment can be extended to 72hours if over weekend. If growth found then micro will contact team and advise on further treatment plan	12 weeks	1 week	Await recommendation from weekly Bone and Joint Infection (BJI) MDT.
1 st stage revision (<i>also known as excision arthroplasty</i>)	IV Gentamicin (calculator)		6 weeks	<i>(from 1st therapeutic vancomycin level or from first dose of organism specific antibiotic)</i>	
Single stage revision	<i>See notes below on PO Rifampicin</i>		12 weeks		

*In cases where Staphylococcus spp. is isolated and there is metal work present post-operatively (DAIR/single Stage revision) in the infective field: **Rifampicin 300mg bd** should be prescribed between day 5 – 10 if patient not bacteraemic, and once any drains from the wound have been removed and wound is dry. **DO NOT** prescribe rifampicin as monotherapy. If rifampicin prescribed with vancomycin then vancomycin level must be in therapeutic range (15 – 20mg/l) prior to starting.

FRACTURE RELATED INFECTIONS

If culture negative fracture related infections where clinical assessment justifies treatment follow guidance below

Intervention	Initial Empirical treatment (initial 48 hours post op)*	Treatment beyond 48 hours	Total duration of treatment (IV + PO)	Minimum duration of IV antibiotics post-op (NB: doesn't include treatment for SAB's)	Ongoing treatment and IVOST/discharge options
Washout & Debridement with:	IV Vancomycin (calculator) + IV Gentamicin (calculator) See notes below on PO Rifampicin	Rationalise antibiotics based on cultures if available. In most cases micro results will be available within 48 hours. If NO pathogenic growth at 48 hours, stop gentamicin and continue vancomycin. Treatment can be extended to 72hours if over weekend. If growth found then micro will contact team and advise on further treatment plan	6 weeks	1 week	Await recommendation from weekly Bone and Joint Infection (BJI) MDT.
Removal of Metalwork			12 weeks	<i>(from 1st therapeutic vancomycin level or from first dose of organism specific antibiotic)</i>	

*In cases where Staphylococcus spp. is isolated and there is metal work present post-operatively (washout with retention of metalwork) in the infective field: **Rifampicin 300mg bd** should be prescribed between day 5 – 10 if patient not bacteraemic, once any drains from the wound have been removed and wound is dry. **DO NOT** prescribe rifampicin as monotherapy. If rifampicin prescribed with vancomycin then vancomycin level must be in therapeutic range (15 – 20mg/l) prior to starting. NB. Any retained metalwork (even a lag screw) in infective field is sufficient to warrant addition of rifampicin even if all other metalwork removed.

SEPTIC ARTHRITIS (Native Joints)

Indication	Initial Antimicrobial Therapy	Total duration of treatment (IV + PO)	Minimum duration of IV antibiotics	Ongoing treatment and IVOST/discharge options
Septic Arthritis	IV Flucloxacillin 2g qds If pen allergic: Vancomycin	4 – 6 weeks (depending on clinical progress)	1 week If on vancomycin then 1 week from 1 st therapeutic level or from first dose organism specific antibiotic	IF patient is under ortho team contact BJI MDT team, IF NOT contact ID team
Septic Bursitis	Flucloxacillin 1g qds PO If pen allergic: Doxycycline 100mg bd	1 week	N/A	Duration may be extended up to 4 weeks on specialist advice

DRUG DOSING INFORMATION

*Normal renal and hepatic function is assumed – adjust if necessary refer to [SPC](#)
EUCAST - For more information around antibiotic susceptibility testing [click here](#)*

IV			ORAL <i>Suppressive therapy may be considered under specialist advice</i>		
Antibiotic	Dosing guidance	Comments	Antibiotic	Dosing guidance	Comments
VANCOMYCIN	As per calculator	Aim for trough level of 15-20mg/l	RIFAMPICIN	300mg bd (or 600mg OD)	*INTERACTION CHECK* Only prescribe once wound dry. Do not prescribe as monotherapy. If prescribed with vanc, vancomycin level must be in range prior to starting. Do not prescribe if patient is bacteraemic.
GENTAMICIN	As per calculator	Prescribe on gentamicin chart. Ensure level is taken between 6 – 14 hrs.	DOXYCYCLINE	100mg bd	Absorption of doxycycline may be impaired by concurrently administered antacids containing aluminium, calcium, magnesium or other drugs containing these cations; oral zinc, iron salts or bismuth preparations
FLUCLOXACILLIN	2g qds	May be increased to 4 hrly in some cases. If confirmed SAB see guidance	CO-TRIMOXAZOLE	960mg bd	If BMI $\geq$ 30 and or wt $\geq$ 100kg then consider 960mg tds
BENZYLPENICILLIN	2.4g qds	May be increased to 4 hrly in some cases. Seek specialist advice	PRISTINAMYCIN	2g bd	Unlicensed medication. May be a delay in getting supply. Discuss with pharmacy to arrange stock.
DAPTOMYCIN	10mg/kg od	*RESERVE ANTIBIOTIC* Renal function and creatine kinase should be measured prior to therapy and monitored at least weekly.	CLINDAMYCIN	450mg qds or 600mg tds	Associated increased risk of CDI

TEICOPLANIN	As per local guidance	Toxicity and blood level monitoring should be done as per guidance	LINEZOLID	600mg bd	*RESERVE ANTIBIOTIC* Monitor lactate weekly.
AZTREONAM	2g tds	*RESERVE ANTIBIOTIC* Alternative to gentamicin for patients with reduced renal function or who have had 96 hours of gentamicin and still require IV. If no stock available then please see guidance on alternatives .	CIPROFLOXACIN	750mg BD	Associated increased risk of CDI. For updated fluoroquinolone warnings click here
DALBAVANCIN	As per local guidance				
CLINDAMYCIN	1.2g qds	Associated risk of CDI			

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