GUIDANCE FOR ORTHOPAEDIC IMPLANT ASSOCIATED INFECTIONS AND SEPTIC ARTHRITIS

NHS Tayside

- **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 discussion of complicated cases please email Tay.bjimdt@nhs.scot**
- **For OHPAT referral please use referral guidance and email both Tay.id@nhs.scot and Tay.immohpat.@nhs.scot**
- **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.**

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 SAB's)	Ongoing treatment and IVOST/discharge options
Debridement, Antibiotics & Implant Retention (DAIR)	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 at 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	8 – 12 weeks	1 week *(from 1st therapeutic vancomycin level or from first dose of organism specific antibiotic)*	Await recommendation from weekly Bone and Joint Infection (BJI) MDT.
1st stage revision (*also known as excision arthroplasty*			6 weeks		
Single stage revision			8 – 12 weeks		

*****In cases where Stapylococcus spp. is isolated and there is metal work present post-operatively (DAIR/single Stage revision) in the infective field: **Rifampicin 450mg bd** should be prescribed once any drains from the wound have been removed and wound is dry. **DO NOT** prescribe rifampicin as monotherapy or in combination with linezolid. If rifampicin prescribed with vancomycin then vancomycin level must be in therapeutic range (15 – 20mg/l) prior to starting. **DO NOT** prescribe rifampicin if patient is bacteraemic.

FRACTURE ASSOCIATED INFECTIONS

In culture negative fracture associated 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:	Removal of Metalwork	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 at 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 *(from 1st therapeutic vancomycin level or from first dose of organism specific antibiotic)*	Await recommendation from weekly Bone and Joint Infection (BJI) MDT.
	Retention of Metalwork			12 weeks		

*****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 450mg bd** should be prescribed once any drains from the wound have been removed and wound is dry. NB. Any retained metalwork (even a lag screw) in infective field is sufficient to warrant addition of rifampicin even if all other metalwork removed. **DO NOT** prescribe rifampicin as monotherapy or in combination with linezolid. If rifampicin prescribed with vancomycin then vancomycin level must be in therapeutic range (15 – 20mg/l) prior to starting.

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 1st therapeutic level or from first dose organism specific antibiotic	IF patient is under ortho team contact BJI MDT team, IF NOT contact ID team

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

Antibiotic	Dosing guidance	Comments
VANCOMYICN	As per calculator	Aim for trough level of 15-20mg/l
GENTAMICIN	As per calculator	Prescribe on gentamicin chart. Ensure level is taken between 6 – 14 hrs.
FLUCLOXACILLIN	2g qds	May be increased to 4 hrly in some cases. If confirmed SAB see guidance
BENZYLPENICILLIN	2.4g qds	May be increased to 4 hrly in some cases. Seek specialist advice
DAPTOMYCIN	10mg/kg od	***RESERVE ANTIBIOTIC*** Renal function and creatine kinase should be measured prior to therapy and monitored at least weekly.
TEICOPLANIN	As per local guidance	Toxicity and blood level monitoring should be done as per guidance
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

ORAL

Antibiotic	Dosing guidance	Comments
RIFAMPICIN	300mg bd	***INTERACTION CHECK*** Only prescribe once wound dry. Do not prescribe as monotherapy or in combination with linezolid. If prescribed with vanc, vancomycin level must be in range prior to starting. Do not prescribe if patient is bacteraemic.
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
CO-TRIMOXAZOLE	960mg bd	
PRISTINAMYCIN	2g bd	Unlicensed medication. May be a delay in getting supply. Discuss with pharmacy to arrange stock.
CLINDAMYCIN	450mg qds or 600mg tds	Associated increased risk of CDI
LINEZOLID	600mg bd	***RESERVE ANTIBIOTIC*** Monitor lactate weekly.
CIPROFLOXACIN	750mg BD	Associated increased risk of CDI. For updated fluoroquinolone warnings click here