Adult Antibiotic Prophylaxis in Head and Neck Surgery

NHS Lanarkshire

General Principles of Prescribing for Surgical Prophylaxis

1. **Indication for prophylaxis** should comply with SIGN 104 guideline i.e when 'highly recommended', 'recommended' or 'considered' within guideline.
2. **Choice of agent:**
   - Adhere to recommended agent in table below where possible
   - Recommendations restrict the use of cephalosporins, clindamycin, quinolones and co-amoxiclav and use narrow spectrum agents where possible
   - Take recent culture results/antibiotic therapy and additional patient risk factors into account eg. morbid obesity, multiple previous surgeries, prosthetic material, diabetes. Discuss with Infection Specialist in a timely manner prior to surgery if multidrug resistance eg. Carbapenemase producing enterobacteriaceae (CPE) isolated
   - Check allergy status of patient including nature of allergy prior to prescribing
3. **Recording of antibiotic** on ''once only'' section of drug cardex and on Anaesthetic Record Sheet
4. **Timing of antibiotic:**
   - ❖ Optimum timing of IV antibiotics is ≤60 minutes prior to skin incision, usually at induction of anaesthesia
   - ❖ Antimicrobial cover may be sub-optimal if given > 1 hour prior to skin incision or post skin incision.
5. **Frequency of administration** should be single dose only unless:
   - ❖ Operation Prolonged (see re-dosing guidance table)
   - ❖ >1.5 litre intra-operative blood loss –Re-dose following fluid replacement (see re-dosing guidance table)
   - ❖ Specifically stated in following guideline

   Document in the medical notes the indication for antibiotic administration beyond 1st dose
6. **Decolonisation therapy** should be used prior to elective surgery if patient MRSA positive and antimicrobial prophylaxis should include cover for MRSA. See NHSL Policy for management of patients colonised or infected with MRSA.

Recommended Agents in Head & Neck Surgery

Procedure	1st Choice	If Penicillin Allergy	If MRSA Positive	Sign 104 Recommendations/ other comments
Head and neck (contaminated/clean-contaminated)	Co-amoxiclav 1.2g IV	Clarithromycin 500mg IV + Metronidazole 500mg IV	Clarithromycin 500mg IV + Metronidazole 500mg IV + [1]Teicoplanin IV 400mg if <65kg or 800mg if ≥65kg	Recommended
Head and neck (clean)	Not routine	Not routine	Not routine	Not recommended for benign surgery. Should be considered for malignant surgery or neck dissection.
Stapedectomy ear surgery	Not routine	Not routine	Not routine	Not recommended
Grommet insertion	Gentamicin HC ear drops single dose	Gentamicin HC ear drops single dose	Gentamicin HC ear drops single dose	Recommended
Tonsillectomy, adenoidectomy, nose, sinus and endoscopic surgery	Not routine	Not routine	Not routine	Not recommended
Complex septorhinoplasty	Co-amoxiclav 1.2g IV	Clarithromycin 500mg IV + Metronidazole 500mg IV	Clarithromycin 500mg IV + Metronidazole 500mg IV + [1]Teicoplanin IV 400mg if <65kg or 800mg if ≥65kg	The duration of prophylaxis should not be greater than 24 hours.
Facial plastic surgery with implant	Flucloxacillin 1g IV	[1]Teicoplanin IV 400mg if <65kg or 800mg if ≥65kg	[1]Teicoplanin IV 400mg if <65kg or 800mg if ≥65kg	Should be considered
Facial surgery (clean)	Not routine	Not routine	Not routine	Not recommended
Open reduction and internal fixation of compound mandibular fracture	Co-amoxiclav 1.2g IV	Clarithromycin 500mg IV + Metronidazole 500mg IV	Clarithromycin 500mg IV + Metronidazole 500mg IV + [1]Teicoplanin IV 400mg if <65kg or 800mg if ≥65kg	Recommended. The duration of prophylaxis should not be greater than 24 hours.
Intraoral bone graft	Co-amoxiclav 1.2g IV	Clarithromycin 500mg IV + Metronidazole 500mg IV	Clarithromycin 500mg IV + Metronidazole 500mg IV + [1]Teicoplanin IV 400mg if <65kg or 800mg if ≥65kg	Recommended
Orthognathic surgery	Co-amoxiclav 1.2g IV	Clarithromycin 500mg IV + Metronidazole 500mg IV	Clarithromycin 500mg IV + Metronidazole 500mg IV + [1]Teicoplanin IV 400mg if <65kg or 800mg if ≥65kg	Recommended. The duration of prophylaxis should not be greater than 24 hours.

[1]If treatment course required after teicoplanin prophylaxis convert to vancomycin (dose according to NHSL treatment protocol with 1st dose 12 hours after teicoplanin). Clinicians should be aware of potential for allergic reactions to teicoplanin

IV Antibiotic Administration and Re-dosing Guidance

❖ Antibiotics should be given as a bolus injection where possible

❖ All re-dosing guidance based on pre-op eGFR>59ml/min/1.73^2; if renal impairment present consult individual drug product literature

Antibiotic	Dose	Administration	Prolonged Surgery	>1.5L blood loss - Re-dose after fluid replacement
Clarithromycin 500mg vial	500mg	Re-constitute 500mg vial with 10ml of water for injection then give by IV infusion in 250ml glucose 5% or sodium chloride 0.9% over 60 minutes into a large proximal vein.	Re-dose 500mg after 8 hours	500mg
Co-amoxiclav 1.2g vial	1.2g	Re-constitute 1.2g vial with 20ml of water for injection and give by slow IV injection over 3-5 minutes.	Re-dose 1.2g after 4 hours	1.2g
Flucloxacillin 1g vial	1g	Re-constitute 1g vial with 15-20ml of water for injection and give by slow IV injection over 3-5 minutes	Re-dose 1g after 4 hours	1g
Metronidazole 500mg minibag	500mg	Already diluted. Give by IV infusion over 20 minutes.	Re-dose 500mg after 8 hours	500mg
Teicoplanin 400mg vial	400mg if patient weight <65kg or 800mg if ≥65kg	Re-constitute slowly with 3.14ml ampoule of water for injection provided and roll gently until dissolved. If foamy, stand for 15 minutes until foam subsides then give EACH vial by slow IV injection over 3-5 minutes.	DO NOT re-dose	200mg if patient weight <65kg or 400mg if ≥65kg

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