Adult Antibiotic Prophylaxis in Breast 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 Breast Surgery

Procedure	1st Choice	If MRSA Positive or Penicillin Allergy	SIGN 104 recommendations/other comments
Breast cancer surgery	Consider flucloxacillin 1g IV	Consider [1]Teicoplanin IV 400mg if <65kg or 800mg if ≥65kg	Prophylaxis should be considered.
Breast reshaping procedures	Consider flucloxacillin 1g IV	Consider [1]Teicoplanin IV 400mg if <65kg or 800mg if ≥65kg	Prophylaxis should be considered.
Breast surgery with implant	Flucloxacillin 1g IV	[1]Teicoplanin IV 400mg if <65kg or 800mg if ≥65kg	Recommended
Breast duct excision in previous abscess/duct fistula	Co-amoxiclav 1.2g IV	Penicillin Allergy: Clindamycin 600mg IV MRSA: [1]Teicoplanin IV 400mg if <65kg or 800mg if ≥65kg + Metronidazole 500mg IV	Review previous microbiology.

[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
Clindamycin 600mg/4ml vial	600mg	Dilute to 50ml with glucose 5% or sodium chloride 0.9% then give by IV infusion over at least 20 minutes.	Re-dose 600mg after 4 hours	300mg
Co-amoxiclav 1.2g vial	1.2g	Re-constitute 1.2g vial with 20ml 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 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