Surgical Antibiotic Prophylaxis Guidelines

Endoscopic Gastrointestinal Procedures

Pre-Operative Considerations

Consider individual risk factors for every patient – need for prophylaxis, drug choice or dose may alter (e.g. immune suppression, presence of prostheses, allergies, obesity, diabetes, remote infection, available pathology or malignancy).

Pre-existing infections (known or suspected) – if present, use appropriate treatment regimen instead of prophylactic regimen for procedure. Doses should be scheduled to allow for re-dosing just prior to skin incision.

For patients with cardiac conditions refer to Antibiotic Prophylaxis Guidelines for Prevention of Endocarditis for further information.

Practice Points

Drug administration

> IV bolus – should be timed ≤ 60 minutes before skin incision (optimal 15 to 30 minutes). Commencing administration of any antibiotic after skin incision or completing administration of antibiotics > 60 minutes before incision reduces effectiveness.

> IV infusion – should be commenced 30-60 minutes prior to incision (e.g. metronidazole). See below for vancomycin administration.

MRSA risk (defined as history of MRSA colonisation or infection, OR inpatient of metropolitan or other high risk hospital for more than the last five days)

> Add vancomycin to cefazolin (see vancomycin administration below)

Vancomycin administration

> Give vancomycin 1g (1.5g for patients >80kg **actual body weight**) by IV infusion started 30-120 minutes before surgical incision and given at a recommended rate of 1g per hour (1.5g over 90 minutes). Note: infusion can be completed after skin incision.

Gentamicin administration

> Dosing should be based on ideal body weight, provided ideal body weight is less than actual body weight.

Repeat doses

A single pre-operative dose is sufficient for most procedures; however, repeat intra-operative doses (2g cefazolin) are advisable:

> for prolonged surgery (> 4 hours from the time of first preoperative dose) when a short-acting agent is used (e.g. cefazolin), OR

> if major blood loss occurs, following fluid resuscitation

Obese patients

> Consider increased dose (3g) of cefazolin if patient is obese (>120kg). Consult ID for advice

Recommended Prophylaxis

	Recommended Prophylaxis	*High risk penicillin/cephalosporin allergy
Percutaneous Endoscopic Gastrostomy/Jejunostomy (PEG/PEJ) insertion/revision	**cefazolin 2g** IV (child: 30mg/kg up to 2g) High risk of MRSA : **ADD vancomycin 1g** IV infusion (1.5g for patients > 80kg **actual body weight**)	**vancomycin 1g IV** infusion (1.5g for patients > 80kg **actual body weight**)
Endoscopic Retrograde Cholangiopancreatography (ERCP) (For patients with a high risk of infection, e.g. known or suspected biliary obstruction, biliary sepsis, pancreatic pseudocyst)	**gentamicin 2mg/kg** IV OR **cefazolin 2g** IV (child: 30mg/kg up to 2g) PLUS consider adding **metronidazole 500mg** IV infusion (child: 12.5mg/kg up to 500mg) High risk of MRSA : **ADD vancomycin 1g** IV infusion (1.5g for patients > 80kg **actual body weight**)	**gentamicin 2mg/kg** IV PLUS consider adding **metronidazole 500mg** IV infusion (child: 12.5mg/kg up to 500mg) High risk of MRSA : **ADD vancomycin 1g** IV infusion (1.5g for patients > 80kg **actual body weight**)
Endoscopic ultrasound-guided fine-needle aspiration	**metronidazole 500mg** IV infusion (child: 12.5mg/kg up to 500mg) PLUS **cefazolin 2g** IV (child: 30mg/kg up to 2g) High risk of MRSA : **ADD vancomycin** 1g IV infusion (1.5g for patients > 80kg **actual body weight**)	**metronidazole 500mg** IV infusion (child: 12.5mg/kg up to 500mg) PLUS **gentamicin 2mg/kg** IV High risk of MRSA : **ADD vancomycin 1g IV** infusion (1.5g for patients > 80kg **actual body weight**)
All other procedures (with or without biopsy), e.g. > endoscopy > colonoscopy > sigmoidoscopy > sclerotherapy > oesophageal dilatation	Prophylaxis NOT recommended	

Post-Operative Care

Except where included above, post-operative antibiotics are NOT indicated unless infection is confirmed or suspected, regardless of the presence of surgical drains

If infection is suspected, consider modification of antibiotic regimen accordingly to clinical condition and microbiological results.

Definitions / Acronyms

DRESS	Drug rash with eosinophilia and systemic symptoms
ID	Infectious diseases
IV	Intravenous
MRSA	Methicillin-resistant *Staphylococcus aureus*
SJS / TEN	Stevens-Johnson syndrome / Toxic epidermal necrolysis

* High Risk penicillin/cephalosporin allergy: History suggestive of high risk (eg. anaphylaxis, angioedema, bronchospasm, urticaria, DRESS/SJS/TEN)

References

Antibiotic Expert Groups (2014). Therapeutic Guidelines: Antibiotic. Version 15. Melbourne, Therapeutic Guidelines Limited.

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