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Clinical Guideline for Antibiotic Prophylaxis in Adult Gastrointestinal Endoscopy

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Ratified by	• Nottingham Antibiotic Guidelines Committee • Nottingham University Hospitals NHS Trust Drugs and Therapeutics Committee
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Consultation:	• Microbiology Consultants • Consultant Gastroenterologists
Evidence Base	• Expert Committee Reports and opinions: NICE, BSG, AHA • Recommended best practice based on clinical experience of guideline developers
Changes from previous Guideline	• Updated in line with the joint NUH Microbiology/Cardiology statement on endocarditis prophylaxis. • These guidelines will be revised following the forthcoming update of BSG guidance.
Inclusion Criteria	• Patients undergoing a gastrointestinal endoscopic procedure.
Exclusion Criteria	• Children
Audit	• Annual Directorate Audit Plans as appropriate
Distribution	• City and QMC campus, Endoscopy Units and all relevant ward areas • Antibiotic website
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This guideline has been registered with the Trust. However, clinical guidelines are 'guidelines' only. The interpretation and application of clinical guidelines will remain the responsibility of the individual clinician. If in doubt consult a senior colleague or expert. Caution is advised when using guidelines after the review date.

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Neutropenic patients undergoing gastrointestinal endoscopy

Antibiotic prophylaxis is recommended to reduce the risk of post-endoscopic symptomatic bacteraemia for all neutropenic patients irrespective of procedure or risk of endocarditis.[3] (see table)

Non-Neutropenic patients

Previously, all patients at risk of endocarditis received antibiotic prophylaxis with any endoscopic procedure. In March 2008 NICE reviewed the evidence[1] surrounding this advice and now recommends that the risks of prophylaxis outweigh the benefits in most cases. This guideline reflects this update and also the Joint Statement from NUH Microbiologists and Cardiologists issued in July 2008[2]

The need for antibiotic prophylaxis is based on the risk of infection from the procedure the higher risk procedures are listed below: [4]

- PEG (percutaneous endoscopic gastrostomy) - risk of peristomal infections
- ERCP (endoscopic retrograde cholangio-pancreatography)- risk of pancreato-biliary sepsis
- Interventional EUS (endoscopic ultrasound) – risk of sepsis

If antibiotics are indicated then the patient should be assessed for any risks of endocarditis (see table) as those at risk should receive a different regimen to those who are not.

It is recommended that prophylactic antibiotics should either be administered shortly before the procedure (ideally 0-30 minutes before)

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Antibiotic Prophylaxis in Adults undergoing Endoscopic Procedures

Conditions associated with Risk of Bacterial Endocarditis

- Patients with a prosthetic cardiac valve
- Patients with previous IE
- Congenital heart disease (CHD) – the following conditions only:
  - Completely repaired congenital heart defect with prosthetic material or device, whether placed by surgery or by catheter intervention, during the first 6 months after the procedure (i.e. pre-endothelialisation).
  - Repaired CHD with residual defects at the site or adjacent to the site of a prosthetic patch or prosthetic device (which inhibit endothelialisation).
  - Unrepaired cyanotic CHD, including palliative shunts and conduits.
- Cardiac transplantation recipients who develop cardiac valvulopathy

NB - Cardiac pacemakers are NOT classed as a risk factor

NON-Neutropenic Patients

Patients at risk of Endocarditis (see above) Undergoing ERCP, PEG or EUS give the following 0- 30 minutes before the procedure

Gentamicin 1.5mg/kg (max 160mg)
Slow IV injection: 2 mins

PLUS

Amoxicillin 1g slow IV injection: 4 mins
OR
if patient allergic to penicillin (or has had a course of a penicillin in the last 2 weeks or is on a penicillin) give
: Teicoplanin 400mg (slow IV injection: 1 min)

Patients with LOW risk of endocarditis but undergoing ERCP or EUS or PEG:

ERCP + *obstructed system, previous cholangitis or pseudocyst*
EUS + *aspiration of cysts only*

Cefuroxime 1.5g (slow IV injection: 3 mins) at least 30 mins before procedure
If severe allergy to penicillins/allergic to cephalosporins
PO 750mg Ciprofloxacin (at least 60-90 mins before procedure)

PEG: Co-amoxiclav 1.2g (slow IV injection; 3 mins) **OR** Cefuroxime 1.5g (slow IV injection;3 mins) at least 30 mins before procedure

Endoscopic procedure other than ERCP, EUS and PEG:

Antibiotic Prophylaxis NOT required

Neutropenic Patients

All endoscopic procedures (including PEG) give the following 0- 30 minutes before the procedure:

Metronidazole 500mg infusion: 20 mins
PLUS
Gentamicin 1.5mg/kg (max 160mg)
Slow IV injection: 2 mins

PLUS

Amoxicillin 1g slow IV injection: 4 mins
OR
if patient allergic to penicillin (or has had a course of a penicillin in the last 2 weeks or is on a penicillin) give:Teicoplanin 400mg (slow IV injection: 1 min)

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Evidence base References

References

1. Antimicrobial prophylaxis against infective endocarditis CG64. NICE, accessed via http://www.nice.org.uk/Guidance/CG64 on 12/12/2008
2. Prophylaxis against endocarditis in dental and other surgery. Joint statement from microbiology and cardiology. Nottingham University Hospitals July 2008
3. British Society of Gastroenterology website statement on antibiotic prophylaxis in endosocopy accessed via **http://www.bsg.org.uk/bsgdisp1.php?id=f8b95d816ee086ec8680&h=1&sh=1&i=1&b=1&m=00023** on 31/10/2008
4. British Society of Gastroenterology (2001) Guidelines in Gastroenterology. Antibiotic prophylaxis in gastrointestinal endoscopy. London: BSG