

DERBY HOSPITALS NHS FOUNDATION TRUST PRESCRIPTION CHART FOR IV DOSING OF GENTAMICIN FOR ENDOCARDITIS (Adult patients)

THERAPEUTIC DRUG MONITORING:

When to take levels:

- Pre-dose (trough) levels are taken immediately before the dose
- Post dose (peak) levels are taken 60 minutes after the dose

The **first set of levels are usually taken at the third dose** and are interpreted before the next dose is prescribed. Levels should be repeated every third dose until in range, and then twice weekly. Place a tick in the prescription chart when levels are due.

If CrCl < 30ml/min take levels at the second dose as these patients are at increased risk of toxicity. If in doubt, discuss with your ward or on-call pharmacist.

Level- micrograms/ml	Date:								
Trough (target <1)									
Peak (target 3-5)									

DOSE ADJUSTMENT GUIDE:

The following is a guide only. Pharmacy should be consulted for advice on dose adjustment if necessary.

The excretion of gentamicin is approximately linear. Increase or decrease the dose by calculating for a mid-range dose level. E.g. to increase the level by 20% increase the dose by 20%

Levels	Potential actions- discuss with pharmacist
Trough < 1mg/l peak 3-5mg/l	Continue the same dose
Trough <1mg/L, peak low	Increase the dose, assume linear kinetics.
Trough <1mg/L, peak high	Reduce dose, assume linear kinetics
Trough >1mg/l Peak >5mg/l	Consider omitting dose, then reduce dose (assuming linear kinetics) and/or increase the dosing interval, consider repeating levels before recommencing dosing depending on how raised they are.
Trough >1mg/L, peak 3-5mg/L	Consider omitting dose, then increase the dose interval
Trough >1mg/L, peak low	Consider omitting dose, then increase the dose BUT also increase dosing interval

- **Monitor serum creatinine closely in all patients. If patient develops AKI, seek advice**

Patients being treated with gentamicin should be monitored for any signs and symptoms of ototoxicity and vestibular toxicity including hearing impairment, dizziness and impaired balance.

References:

1. BSAC guidelines for the diagnosis and antibiotic treatment of endocarditis in adults: a report of the working party of the British Society for Antimicrobial Chemotherapy Journal Antimicrobial Chemotherapy November 14 2011

DERBY HOSPITALS NHS FOUNDATION TRUST INTRAVENOUS MULTIPLE DAILY GENTAMICIN FOR ENDOCARDITIS PRESCRIPTION (Adult Patients)

Development of Guidelines:	Sophie Leech Resident Pharmacist, Julia Lacey antimicrobial pharmacist
Consultation With:	Consultant Microbiologists, Clinical Pharmacy Group, consultant cardiologists
Version	3.1
Approved By:	Antimicrobial Stewardship Group 9/12/2020 Cancer and diagnostics divisional governance 29/4/2021 D+T committee (CrCl and IBW calculation) 18/8/2020
Review Date:	
Key Contact:	Dr Julia Lacey Antimicrobial Pharmacist
Changes from previous guideline:	Use of adjusted body weight rather than ideal body weight to calculate creatinine clearance (except those who are underweight) Change of the equation to calculate ideal body weight from the Broca equation to the Devine formula