SAFETY ALERT

Vancomycin (AUC/MIC) based Monitoring Implementation

Sharing a new practice alert

Why AUC/MIC?

The optimal pharmacodynamic parameter for the prediction of efficacy of vancomycin is the area under the concentration-time curve over 24 hours to minimum inhibitory concentration(AUC/MIC)

To calculate the AUC: Collect two concentrations (trough/peak) obtain near the steady-state preferably during the same dosing interval ***(will be calculated by the clinical pharmacist)***

For who?

- ***AUC/MIC Protocol for*** All adult and pediatric patients with normal or impaired renal function ***(Not AKI or on dialysis)***
- ***Trough protocol for*** unstable renal function or dialysis (HD, PD, CRRT)

When to withdraw?

- If Trough level ordered:

Withdraw 30 min before Vancomycin dose

Frequency	Monitoring
Q8hr	Pre 4th - 5th dose
Q12hr	Pre 4th
Q24hr	Pre 2nd -3rd

- If the patient is on dialysis, withdraw trough level 30 min before the dialysis session
- If Peak ordered for AUC/MIC calculation: withdraw1-2 hours post end of Vancomycin infusion

Target?

Vancomycin Monitoring	AUC based Protocol	Trough-based protocol
Target	AUC 400-600 mg*g/L	Trough 10-20 mg/L

What to do with trough results?

After trough withdrawal, if the level was:

- >20 hold 

the dose
- 20 or less administer Vancomycin dose.

Frequency of Monitoring?

Once AUC reached the target, monitoring will be through trough

- Recheck weekly: prolonged therapy and hemodynamically stable
- Recheck more frequently: hemodynamically unstable or change in renal function baseline

What are the Nursing implications of vancomycin administration?

- Withdraw the trough/Peak level at the correct time for effective therapeutic drug monitoring
- Document accurate patient weight/ height for critical calculations
- Infuse over two hours (Rapid infusions may cause) hypotension
- Monitor IV site closely

***AUC/MIC** will be ordered and calculated by the clinical pharmacists If any query please contact the assigned clinical pharmacist with the unit & Inpatient pharmacy after hours*

Prepared by *Clinical Support Pharmacy and Medication Safety.*