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Updates on Vancomycin Therapeutic Drug Monitoring

Every medication has intended effect(s) or indication(s), and side effects or adverse drug reactions. Such side effects may or may not happen even if the dose was within acceptable range. For instance, vancomycin is known to be a powerful antibiotic to eradicate *Methicillin Resistant Staphylococcus Aureus* (MRSA) when used appropriately. However, it could potentially cause acute kidney injury since it is dependent on individual's actual body weight and kidney function to be cleared out of the body system, unless otherwise the dose regimen was tailored properly with timely monitoring of the serum trough level.

Furthermore, every individual react to each medication differently; some are prone to unwanted reactions compared to others. That in part is attributed to the varying physiological status which affects pharmacokinetics and pharmacodynamics of the drug. Not to mention the effect of genetic polymorphisms, which are known to influence outcomes with certain medications.

Hence, it is tremendously important to establish suitable dose regimen and maintain safe and effective serum concentrations of such medications on a timely manner in order to optimize pharmacological efficacy and eliminate, or at least minimize, potential harm.

The objective of this presentation is discuss the therapeutic updates as well as best practices of Vancomycin therapeutic drug monitoring both for adults and pediatrics.