Therapeutic Drug Monitoring: Fundamentals, And Optimization

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Abstract

Therapeutic drug monitoring (TDM) is a teamwork clinical pharmacokinetic services aimed to optimize pharmacotherapy of certain drugs such as those with a narrow therapeutic range, complicated pharmacokinetics. It involves the determination of drug level in blood samples taken at the appropriate time. Interpretation of results requires integration of pharmacokinetics, the pharmacodynamics of the drug and the patient's clinical profile. To be cost-effective the service should be optimized. This review was written by experts from different developing countries to highlight the fundamentals of the service and provide suggestions for its optimization. These cover the rationale of requesting drug level, design of request form, optimal sampling, and analytical tools. guidelines for appropriate interpretation of drug levels; completeness of the roles of the qualified medical team; continuing education and skills development; involve the patients in improving the service, conducting relevant research; use PK software and integration of TDM with pharmacogenomics

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