Faculté de pharmacie Séminaire de l'axe

« Cibles thérapeutiques et pharmacothérapie »



"Target Concentration Intervention - Can we hit the target?"

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Mercredi, 28 mai 2014 Pavillon Jean Coutu S1-151 10h30

À l'invitation du professeur France Varin

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A rational approach to the difficult task of determining what dose of a medicine should be used in an individual patient is based on achieving a target therapeutic effect. The PKPD approach to drug development has been widely advocated but its impact on clinical practice is harder to evaluate. Dose individualization can be approached from a PKPD principle based perspective. A criterion for acceptably safe and effective dosing can be devised by defining the lower and upper concentrations as a fraction of the target concentration which would be considered safe and effective and the fraction of the population which should lie within these bounds. Application of a quite rigorous safe and effective criterion of 95% of concentrations within 80-125% of the target is achievable for busulfan because between-occasion variability in clearance is small. On the other hand, because between-occasion variability is relatively large only 65% of patients treated with tacrolimus will have concentrations within 80-125% of the target. PKPD provides the tools to achieve these targets if clinicians have the courage to move away from their traditional empirical approaches.