Drug Metabolism

OBJECTIVES

Are to:

Explain the phases of drug metabolism with examples

Describe microsomal and non microsomal metabolism with genetic variability

Describe the first pass effect

Discuss hepatic enzyme induction and inhibition with examples

Assess three dugs for which there are well defined genetically determined differences in metabolism and its clinical implication

Why drug metabolism is needed ?

Important Points for Drug Metabolism

Phase I Reactions
Genetic variability of CPYs
inducers of Cytochrome P450 (CPYs)
Inhibitors of Cytochrome P450 (CPYs)
Phase II Reactions
GENETICALLY DETERMINED DIFFERENCES IN METABOLISM

Examples for drugs with genetically determined differences in metabolism

3- Rate of phase I oxidation by cytochrome P450:

are ***genetically*** determined in cases of:
deprosoquin, phenformin, dextromethorphan,

metoprolol & some tricyclic antidepressants