Clinical Pharmacokinetics

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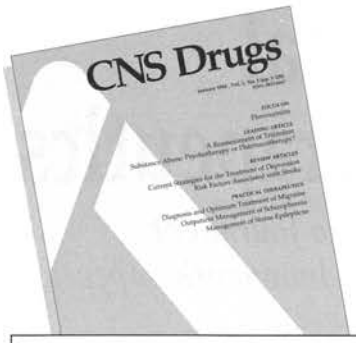

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Aim and Scope: Through a structured programme of review articles, the Journal aims to assist in the continuing development of clinical pharmacokinetics as a speciality area important for the improvement of drug therapy, and to further postgraduate education in clinical pharmacology and therapeutics. A particular emphasis is the aspect of pharmacokinetic-pharmacodynamic relationships (including both desired and unwanted effects). The scope of the Journal also includes pharmacokinetic properties of therapeutic drugs, therapeutic drug monitoring, influence of age or disease states on drug kinetics, pharmacokinetic optimisation of drug therapy, pharmacokinetic drug interactions, clinically relevant bioavailability issues and regulatory aspects of pharmacokinetics with practical implications.
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Lamotrigine Clinical Pharmacokinetics

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Summary

Lamotrigine is a new antiepileptic agent chemically unrelated to any established drugs in use. The drug can be estimated in biological fluids by high performance liquid chromatography and immunoassays. It is rapidly absorbed, reaching peak concentrations within about 3 hours postdose. The bioavailability of the oral formulation is about 98%. The area under the plasma concentration-time curve indicates dose-linear pharmacokinetics. The degree of plasma protein binding is 56%. Saliva concentrations are 46% of the plasma concentration. The concentration of lamotrigine in the brain is similar to the total concentration in the plasma.

Lamotrigine exhibits first-order linear kinetics during long term administration. 43 to 87% of a dose is recovered in the urine, predominantly as glucuronide metabolites. Mean half-lives of lamotrigine in healthy volunteers (single and multiple doses) as well as in epileptic patients receiving lamotrigine monotherapy range from 22.8 to 37.4 hours. Enzyme-inducing antiepileptic drugs such as phenytoin, phenobarbital (phenobarbitone) or carbamazepine reduce the half-life

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