Bioavailability and related pharmacokinetics in man of orally administered L-5-hydroxytryptophan in steady state.

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Abstract
The bioavailability of orally administered L-5-hydroxytryptophan in steady state was investigated at four increasing multiple dose levels in five patients suffering from various myoclonic disorders. An L-aromatic amino acid decarboxylase inhibitor was co-administered in all the experiments. The disposition pharmacokinetics of the amino acid had been established in the same patients in preceding intravenous single dose experiments. The finding of a direct proportionality between the size of the oral dose level of L-5-hydroxytryptophan and the corresponding areas under the plasma concentration curves within a dosage interval at steady state strongly indicates dose independent, linear pharmacokinetics of the compound. The systemic availability of L-5-hydroxytryptophan exhibited an interindividual range of 47-84%, with a mean value of 69.2% +/- 4.7 S.E.M. The absorption took place at a rather slow rate as judged from times of 1.8 to 3.3 hours elapsing from administration of the compound until occurrence of the maximum measured plasma concentrations. Transitory nausea and vomiting were only recognized in few instances during the gradual building up of increasing steady state levels of L-5-hydroxytryptophan in the patients, and the importance of a slow initiation of therapeutical treatment with the amino acid is emphasized.

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