The pharmacokinetics of oral and intravenous nalbuphine in healthy volunteers

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Date: 1988-02

Abstract:

The pharmacokinetics of nalbuphine were studied in 10 healthy volunteers on two separate occasions following administration by either the intravenous (20 mg) or oral (60 mg) route. After administration, serum concentrations of nalbuphine were measured for 12 h using a high pressure liquid chromatography assay, and pharmacokinetic parameters were derived using a three compartment model. After i.v. administration, elimination half-life was 222 (111-460) min (mean and range) and total body clearance was 1.5 (0.8-2.3) 1 min-1.Cmax after oral administration was 21.4 (6.0-36.2) ng ml-1 and tmax was 46.6 (15.3-89.0) min. Bioavailability of the oral preparation was 11.8 (6.1-20.1)%.