SUBCUTANEOUS BIOAVAILABILITY OF RECOMBINANT HUMAN ERYTHROPOIETIN IN CHRONIC RENAL FAILURE PATIENTS.

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To evaluate subcutaneous bioavailability of recombinant human erythropoietin(rhEPO), the cross-over subcutaneous (SC) and intravenous (IV) pharmacokinetic studies of rhEPO have been performed in 7 chronic renal failure patients undergoing intermittent hemodialysis. Each of 50 U/kg rhEPO was administered to the subjects with at least one week interval. Plasma erythropoietin levels were determined by radioimmunoassay up to 72 hr after the doses.

Mean plasma half-life and steady-state volume of distribution of rhEPO after IV dose were 10.4 ± 6.5 hr and 123.4 ± 56.8 mL/kg, respectively.

SC administration of rhEPO resulted in a slow increase of rhEPO levels which reached a maximum of 55.4 ± 58.2 mU/mL about 10 hr after the doses.

Subcutaneous bioavailability of rhEPO determined by AUC_{SC}(0-72hr) / AUC_{IV}(total) was 28.1 ± 13.4 %.