

## Disposition kinetics of dibekacin in patients with renal failure and in patients undergoing hemodialysis

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Dibekacin pharmacokinetics was studied in 3 healthy volunteers, 5 patients with renal failure presenting  $Cl_{cr}$ , between 4.0 and 67 ml min<sup>-1</sup> per 1.73 m<sup>2</sup> of body surface and 5 anephric patients given as a 30 minute intravenous infusion. The antibiotic was assayed in plasma and urine by means of a high performance liquid chromatography (HPLC) method. A two compartment kinetic model was used to describe the bi-phasic decline of plasma concentration and to calculate the different pharmacokinetic parameters. Slow disposition and elimination rate constants  $\lambda_1$  and  $k_{10}$  respectively, and total body clearance were markedly diminished in anephric patients ( $p < 0.001$ ):  $t_{1/2\lambda_1} = 2.12$  h,  $k_{10} = 0.642$  h<sup>-1</sup> and  $Cl = 0.882$  ml/min per kg, in normal subjects and  $t_{1/2\lambda_1} = 4.73$  h,  $k_{10} = 0.278$  h<sup>-1</sup> and  $Cl = 0.693$  ml/min per kg in anephric patients. The apparent volumes of distribution increased while the creatinine clearance of the patients decreased. Thus  $V_d(\text{area})$  of volunteers with normal renal function was