Latin American Journal of Pharmacy
(formerly *Acta Farmacéutica Bonaerense)*
Lat. Am. J. Pharm. **31** (2): 287-91 (2012)

Regular Article
Received: February 14, 2012
Revised version: March 25, 2012
Accepted: March 25, 2012

Pharmacokinetics and Evaluation of the Safety of Cefepime Administered to Rabbits

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***SUMMARY*. The aim of this study was to determine the kinetic behaviour and the safety of cefepime administered to rabbits. For this, rabbits (*n* = 29) were used and distributed in Groups 1 (G1), 2 (G2) and Control (CG). Animals from G1 (*n* = 21) received a monodose of cefepime intravenously, (20 mg/kg weight) and, after this, blood samples were collected, controlling the time. Rabbits from Group G2 (*n* = 4) received multidoses of cefepime (20 mg/kg weight, intravenously), and blood and urine samples were taken in order to analyse them. Animals from Groups G2 and CG were controlled electrocardiographically (ECG) throughout the treatment. Rabbits from Group CG (*n* = 4) were evaluated and samples were obtained in the same way and within the same time periods as G2. The concentration-time curves of cefepime were determined using a biological method, and it was analysed through a non-compartmental model. The pharmacokinetic results (Mean ± S.D.) were: $t_{½}$ = 1.6 ± 0.4 h; AUC = 212.1 ± 82.1 *μ*g/mL.h; AUMC = 387.4 ± 132.2 *μ*g/mL.h; V_{ss} = 216.7 ± 63.4 mL/kg; CL = 99.7 ± 19.4 mL/kg y TMR = 2.0 ± 0.4 h. The cefepime administered to rabbits in therapeutic doses did not produce any biochemical, electrocardiographic or renal modification.**

KEY WORDS: Cefepime, Pharmacokinetics, Rabbits, Safety.

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