



Evaluation of the influence of obesity on the oral pharmacokinetics of oseltamivir

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Oseltamivir is a neuraminidase inhibitor that is very effective in the treatment of influenza. During 2009 pandemic, this drug was widely used and empirically, obese patients received twice of the recommended dose, assuming that plasma levels may be reduced in this kind of patients. In order to establish if this practice was adequate, we decided to compare the oral pharmacokinetics of oseltamivir phosphate, by measuring oseltamivir carboxylate (the active metabolite), in obese and non-obese volunteers. Thirteen obese and --- non-obese volunteers were enrolled in this study that was approved by the Institutional Research and Ethics Committees and gave written informed consent for participation. After an overnight fast, non-obese subjects received an oral 75 mg dose of oseltamivir phosphate, whereas, obese patients received 75, 150 and 300 mg in three different sessions under a crossover design. Plasma samples were obtained at selected times during --- h and stored frozen until analysis by high-performance liquid chromatography with fluorescence detection. Pharmacokinetic parameters were obtained by non-compartmental analysis and compared by analysis of variance. C_{max}, AUC increased linearly with the administered doses in obese patients, whereas, no statistically significant changes in t_{1/2} and t_{max} were observed. Comparison of pharmacokinetic parameters after administration of 75 mg in obese and non-obese patients indicated that no difference in pharmacokinetics of this drug is observed and therefore, no adjust of dosage regimen based on body weight is required.