Clinical pharmacokinetics aspect of drugs in patients with hypertension at the Internal Medicine Department of Hospital Padang Panjang, Indonesia

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A study on clinical pharmacokinetics aspect of drugs in patients with hypertension at the Internal Medicine Department of Hospital Padang Panjang, Indonesia has been conducted. The aims of the research was to determine the accuracy of antihypertensive medications to achieve targeted blood pressure and to assess the dosage regimen based on liver and/or kidney functions, also drug interactions. The study was performed from December 2013 to February 2014. This is observational prospective study with 49 patients who met the inclusion and exclusion criteria. Data was analyzed descriptively. Results showed that 60.42% antihypertensive medications were effective but 39.58% not effective to reach the targeted blood pressure. There were 3 cases in appropriate dose regimen covering 1 case of Digoxin, 1 case of Furosemide and 1 of case Captopril. From the cases, doses exceeded than individual dose included Digoxin and Captopril. There were 14 cases of pharmacokinetic interactions and 2 cases of pharmacodynamic interactions. Interaction between Amlodipine and Diltiazem (7 patients, 14.58%) influenced the blood pressure control in patient. These are pharmacokinetic interaction because Diltiazem decreases metabolism of Amlodipine by inhibiting enzyme CYP 3A3/4.

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