CLINICALLY SIGNIFICANT DRUG INTERACTIONS
AMONG HIV-INFECTED PATIENTS RECEIVING
ANTIRETROVIRAL THERAPY

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Abstract. We conducted a cross sectional study of the outpatient medical records of 1,000 HIV-infected patients receiving antiretroviral therapy (ART) in 2011 to determine the incidence of clinically significant drug interactions (CSDI). The severities of the CSDI were graded following the Micromedex® 2.0 database and the Department of Health and Human Services (DHHS) 2012 HIV treatment guidelines. Three hundred thirty-five patients (34%) had 554 episodes of CSDI. Of which 337 episodes (61%), 163 episodes (29%) and 54 episodes (10%) had grades 2, 3 and 4 severity CSDI, respectively. The CSDI were caused by protease inhibitor (PI)-based drug regimens in 79%, by efavirenz-based regimens in 34% and by nevirapine-based regimens in 10% (p<0.001). The three most common grade 4 CSDI were: a PI with simvastatin (n=24), simvastatin with gemfibrozil (n=24) and didanosine with allopurinol (n=2). The three most common grade 3 CSDI were: a PI with a statin drug except simvastatin (n=56), fenofibrate with a statin drug (n=28) and amlodipine with simvastatin (n=14). On multivariate analysis, risk factors associated with CSDI were: receiving a PI-based regimen (OR 14.44; 95%CI: 9.10-22.88), having dyslipidemia (OR 3.94; 95%CI: 1.89-8.21), having >5 items prescribed at a time (OR 1.80; 95%CI: 1.23-2.63), seeing a doctor >4 times a year (OR 1.72; 95%CI: 1.20-2.46), having hypertension (OR 0.60; 95%CI: 0.37-0.98), having a duration of receiving ART of >5 years (OR 0.46; 95%CI: 0.28-0.77) and having a CD₄ count of >200 cells/mm³ (OR 0.46; 95%CI: 0.26-0.84). CSDI were common among HIV-infected patients receiving ARV in our outpatient clinic. Patients having a low CD₄ count, having dyslipidemia, receiving PI-based ART, having a frequent number of visits per year and having a large number of items prescribed at each visit had a greater chance of a CSDI.

Keywords: antiretroviral, drug interaction, HIV, Thailand

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