

Potential Drug-drug Interactions between Antiretrovirals and Medications for Comorbidities among the Aging HIV-infected Patients

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Background/Objective

Previous study has shown that a significant proportion of the HIV-infected patients aged 50 years or older have multiple comorbidities such as hypertension, dyslipidemia and diabetes mellitus. However, data indicating the potential drug-drug interactions (DDIs) between antiretrovirals and medications for these comorbidities are limited. We aimed to explore and describe the prevalence and severity of these DDIs.

Method

By reviewing the medical records, we identified HIV-infected patients aged 50 years or older who had been receiving combination antiretroviral therapy (cART) and anti-hypertensive, anti-diabetic, and lipid-lowering agents between January and December 2013. The DDIs was defined according to the comprehensive University of Liverpool HIV DDIS database and Micromedex[®]. We considered potential DDI only when these drugs had been prescribed concomitantly for ≥ 1 day.

Result

We included 310 patients in this study, in whom 151 (48.7%) were receiving concurrent cART and medications for hypertension, diabetes, or hyperlipidemia. According to the Liverpool database and Micromedex, at least 1 potential DDI was identified in 131 (86.8%) and 114 patients (75.5%), respectively, with the median number of DDIs being 2 (range, 1-13) and 2 (1-11), respectively. While there were no DDIs that were defined as contraindications for concurrent use, 148 DDIs (65.8%) were categorized as major in severity based on Micromedex definitions. The most common antiretrovirals were atazanavir (88 major DDIs, 59.5%) and ritonavir (37, 25.0%). Amlodipine, atorvastatin and glyburide contributed to 79, 30 and 23 potential DDIs, for anti-hypertensive, lipid-lowering and anti-diabetic agents, respectively.

Conclusion

We found a significant proportion of the HIV-infected patients aged 50 years or older who had been concurrently receiving cART and cardiovascular drugs exhibited potential DDIs. Healthcare professionals should be alerted to the issues of polypharmacy among the HIV-infected elderly and efforts be made to minimize the potential harms.