Prevalence of comedications and effect of potential drug-drug interactions in the Swiss HIV Cohort Study

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BACKGROUND: Potential drug-drug interactions (PDDIs) might expand with new combination antiretroviral therapies (ART) and polypharmacy related to increasing age and comorbidities. We investigated the prevalence of comedications and PDDIs within a large HIV cohort, and their effect on ART efficacy and tolerability.

METHODS: All medications were prospectively recorded in 1,497 ART-treated patients and screened for PDDIs using a customized version of the Liverpool drug interactions database.

RESULTS: Overall, 68% (1,013/1,497) of patients had a comedication and 40% (599/1,497) had > or = 1 PDDI. Among patients with comedication, 2% (21/1,013) had red-flag interactions (contraindicated) and 59% (597/1,013) had orange-flag interactions (potential dose adjustment and/or close monitoring required). The latter involved mainly central nervous system drugs (49%), cardiovascular drugs (34%) and methadone (19%). In the multivariate analysis, factors associated with having a comedication were advanced age, female gender, obesity and HCV infection. Independent risk factors for PDDIs were regimens combining protease inhibitors and non-nucleoside reverse transcriptase inhibitors (odds ratio [OR] 3.06, 95% confidence interval [CI] 1.44-6.48), > or = 2 comedications (OR 1.89, 95% CI 1.32-2.70), current illicit drug use (OR 2.00, 95% CI 1.29-3.10) and patients with HCV infection (OR 1.74, 95% CI 1.19-2.56). Viral response was similar in patients with and without PDDIs (84.5% versus 86.4%; P=0.386). During follow-up, ART was modified in 134 patients with comedication regardless of the presence of PDDIs (P=0.524).

CONCLUSIONS: PDDIs increase with complex ART and comorbidities. No adverse effect was noted on ART efficacy or tolerability; however, most PDDIs affected comedication but were manageable through dose adjustment or monitoring.

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