PostScript

LETTERS

Simvastatin co-prescribed with protease inhibitors despite dangerous drug interactions

Drug interactions with anti-retrovirals are frequent and can be dangerous. Protease inhibitors (PIs) inhibit the metabolism of simvastatin, and co-administration is contra-indicated. Despite this, we have seen a recent cluster of patients prescribed simvastatin whilst on PIs.

A 58-year-old man was taking abacavir, lamivudine, atazanavir and ritonavir. His HIV physician noted raised cholesterol and wrote to the patient and his general practitioner (GP), stating that simvastatin is not recommended with his antiretroviral combination, but low dose atorvastatin or pravastatin is safe. Simvastatin was prescribed by the GP.

A 52-year-old woman was taking didanosine, efavirenz, atazanavir and ritonavir, as well as gliclazide, doxazosin and bendroflumazide. A letter from her HIV physician to her GP listed her medications and mentioned that her cholesterol was 8.5. Her GP started simvastatin. The patient took the first dose but stopped after reading the medication insert leaflet.

A 53-year-old man was taking stavudine, lamivudine and nelfinavir. Pravastatin was started by his HIV physician, and letters were written regularly to his GP about current medications. Pravastatin was changed to simvastatin by his GP 6 years later.

At least four other patients at our centre on protease inhibitors (PIs) have recently been switched to simvastatin by GPs. None have suffered adverse consequences, although similar cases have resulted in rhabdomyolysis and death.¹

PIs, including ritonavir, atazanavir, lopinavir, saquinavir and nelfinavir, inhibit cytochrome P450 (CYP) 3A4 activity, which metabolises simvastatin and atorvastatin. Simvastatin exposure is increased by up to 3000% by PIs,² and co-administration is contra-indicated. Atorvastatin concentrations are increased by a much smaller margin, and atorvastatin may be used cautiously. Pravastatin and rosuvastatin are not metabolised by CYP3A4 and are safe to use with PIs.

It should also be noted that efavirenz, a non-nucleoside reverse transcriptase inhibitor, is an inducer of CYP3A4 metabolism, and reduces the concentrations of active simvastatin, atorvastatin and pravastatin by 58%, 34% and 40%, respectively.³

GPs, and all physicians, are under pressure to prescribe cheaper medications where possible, and this is driving the switch to simvastatin. Simvastatin is also available without prescription in pharmacies. These cases highlight the importance of effective communication between HIV physicians, GPs and the patient, not only about current medications but also about potential drug interactions. Where PIs are being used, simvastatin must be avoided.

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References

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The extent of self-initiated STI and HIV prophylaxis (auto-PEP) and treatment in MSM attending GUM and HIV clinic services

In response to a decline in sexually transmitted infection (STI) diagnoses¹ and rising gonococcal antibiotic resistance in men who have sex with men (MSM) attending our genitourinary medicine (GUM) service², we set out to describe patient's STI treatment histories (including the extent of patient self-initiated

treatment). Ethical approval was obtained to provide anonymous questionnaires to 150 consecutive patients in two clinics: a GUM and human immunodeficiency virus (HIV) outpatient clinic located in central London. Following consent, participants were given a questionnaire, which asked details regarding STI diagnosis and treatment over the preceding 5 years. Reasons for non-participation were not collected. No significant differences in the response rate were observed between the GUM clinic (70%) and the HIV outpatient clinic (64%; $p = 0.269$). The median age groups of respondents from the sexual health and HIV outpatient clinics were 26–30 and 36–40 years of age, respectively. Analysis of MSM responses are presented in table 1.

Approximately twice the percentage of MSM attending the HIV outpatient clinic reported previous infections with gonorrhoea and syphilis compared with those attending GUM clinic services. The majority of participants reported receiving STI treatment from GUM or HIV clinics. However, in both groups, approximately 5% reported self-initiating STI prophylaxis or treatment at some time in the past 5 years. All of these men reported at least one STI diagnosis over this recall period. One MSM respondent reported giving anti-retroviral treatment to a partner as HIV post-exposure prophylaxis ('auto-PEP') without medical supervision. Two non-MSM respondents reported providing 'auto-PEP' to a partner.

The percentage of individuals reporting self-initiated prophylaxis or treatment in this study is low. However, the issues for this group of patients are important and include the need to screen for co-existent STIs, inappropriate drug use, antimicrobial resistance and partner notification. The use of HIV treatments as 'auto-PEP' in HIV-negative individuals, if poorly monitored, may be dangerous (e.g. abacavir or nevirapine). It is important that easy access for such patients is maintained and that they are properly educated regarding the relevant issues.

Table 1 MSM questionnaire responses

	GUM clinic	HIV outpatient clinic
Number of respondents describing themselves as MSM	21/105 (20.0%)	78/96 (81.3%)
Recall of STI history		
No previous STI	5/21 (23.8%)	9/78 (11.5%)
Gonorrhoea diagnosed or suspected	6/21 (28.6%)	43/78 (55.1%)
Syphilis	2/21 (9.5%)	18/78 (23.1%)
More than one STI	8/21 (38.1%)	42/78 (53.8%)
HIV positive	2/21 (9.5%)	78/78 (100%)
Not tested for HIV	5/21 (23.8%)	–
Recall of sources of previous STI antibiotic treatment		
GUM clinic	16/21 (76.2%)	72/78 (92.3%)
HIV outpatient clinic	0/21 (0%)	22/78 (28.2%)
GP/NHS walk-in clinic	1/21 (4.8%)	7/78 (9.0%)
Pharmacy abroad	1/21 (4.8%)	1/78 (1.3%)
Internet	1/21 (4.8%)	1/78 (1.3%)
Other	–	4/78 (5.1%)
Recall of STI or HIV prophylaxis		
HIV post-exposure prophylaxis (via GUM clinic or A&E)	2/21 (9.5%)	2/78 (2.6%)
Self-initiated STI prophylaxis	1/21 (4.8%)	4/78 (5.1%)
Provided anti-retroviral treatment to a partner as HIV prophylaxis ('auto-PEP')	–	1/78 (1.3%)

GUM, genitourinary medicine; HIV, human immunodeficiency virus; MSM, men who have sex with men; STI, sexually transmitted infection