Underutilization of recommended interventions for prevention of cardiovascular (CV) disease in HIV-infected patients with established CV disease or diabetes

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Introduction

In HIV-infected populations with established CV disease and/or diabetes mellitus, a number of interventions are recommended for the prevention of further CV events and CV-related mortality [1]. Whilst some studies have reported lower than anticipated uptake of these interventions in HIV-infected individuals [2], their utilization by HIV-infected individuals has not been described in detail. Little information is available on the use of lipid-lowering drugs (LLD) or the frequency of smoking cessation in these individuals [3, 4].

We used information from the large, multi-centred D:A:D Study to describe the use of LLD and smoking cessation in HIV-infected individuals with established CV disease or diabetes.

Methods

We identified all individuals who had a first CV event (myocardial infarction [MI], stroke or invasive CV procedure) or who were newly diagnosed with diabetes mellitus during follow-up in the D:A:D study between December 1999 and February 2006. Use of LLD, smoking cessation and other CV risk factors (Table 1) prior to the CV event diagnosis and over the subsequent six months were assessed.

Patients with established CV disease and diabetes mellitus were analysed separately. Individuals were excluded from each analysis if they had <6 months of follow-up after their event. Statistical analysis was performed using Chi-squared tests and multiple logistic regression.

Results

Interventions in individuals with established CV disease

348 individuals with a first CV event during prospective follow-up and no newly diagnosed diabetes mellitus were included (Table 1). At or after the time of the CV event, LLD were exclusively used, while the use of antiplatelet agents (78.3%), statins (77.1%) and ACE inhibitors (72.6%) were more common. There were no significant variations in the proportion that started LLD over calendar years (P=0.03).

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Results (continued)

3. Only those who initiated LLD were more likely to have hyperlipidaemia (p=0.02) and to have total cholesterol levels >6.2 mmol/l (p=0.004) were independently associated with the initiation of LLD (Table 2).

3. Of the 225 individuals known to be current smokers at the time of a CV event, 72 (32.0%) were recorded as ex-smokers by six months after their event; discontinuation of smoking was more common in those experiencing an MI than in those with other events (p=0.03) but did not vary by calendar year.

3. Within the D:A:D Study cohort, 289/318 (90.9%) of patients who were receiving protease inhibitors at the time of a CV event were still on this class of drugs in the subsequent six months.

3. Smoking cessation was rare in both groups of patients, despite being strongly recommended.

Conclusions and discussion

Whilst the use of LLD has increased over time, reflecting an increased awareness of CV disease in HIV-infected individuals, many patients are at high risk of CV disease and are not receiving such preventative therapies as recommended. This is true for both oral and parenteral LLD, as well as for statins. A significant proportion of patients were found to be at high risk of CV disease, so the results of the present study may also help to inform the prevention of CV disease in other, lower-risk, individuals, and the role of other prevention interventions should be supported.

With evidence of the efficacy of LLD in HIV-infected individuals [5, 6], the higher risk of CV disease associated with prolonged exposure to PI therapy (6), as well as the presence of other established risk factors for CV disease, emphasises the importance of the appropriate interventions in these patients. Given this, it is somewhat surprising that a high proportion of individuals receiving protease inhibitors at the time of a CV event remained on this class of drugs over the next six months.

Smoking cessation is rare in high-risk populations, and may include patient choice as well as concerns about high pill burden and potential interactions with antiretroviral drugs.

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References


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