Management guidelines for non-AIDS morbidity result in increased screening but no change in primary prevention implementation

We read with interest the report from De Socio et al. [1] in the AIDS February edition, which described decreasing cardiovascular risk (CVR) amongst Italian HIV-positive patients from two large multicentre surveys between 2005 and 2011. The authors attribute this finding to decreased smoking rates, the more metabolically friendly profile of newer antiretroviral agents and the impact of medical education programs aimed at improving CVR management implemented across the centres from which the cohorts were recruited. Unfortunately, our local experience of the impact of education programmes on CVR management is more sobering.

In April 2013, we developed local education tools and guidelines for CVR management in HIV-positive patients. They were easy-to-read, colour-coded flow charts that included advice on the type and frequency of screening tests, thresholds for the initiation of primary prevention therapy and triggers for referral to specialists. The guidelines were released in concert with an intensive education programme that consisted of 6 weeks of weekly physician training sessions along with internet and E-mail based promotion and distribution of the new guidelines, which were available in electronic and hard copy formats in clinic review rooms.

An audit of compliance with recommendations for the screening and management of CVR was performed prior to and 1 year after the implementation of the education tools to determine the impact on practice. Two unique groups of 100 consecutive HIV-positive outpatients who attend the Department of Infectious Diseases, Alfred Hospital, for routine HIV care pre- and postintervention were compared. Data were collected retrospectively from the electronic medical record and pathology systems with all results from the last 2 years included.

The results were summarized by group, using Fisher’s exact or chi-squared tests as appropriate to evaluate differences in proportions, or the Mann–Whitney U-test for continuous data with all statistical analyses performed using Stata 11.0/IC (College Station, Texas, USA). The project was approved by the Alfred Ethics committee (Project number: 167/13).

Table 1 details patient characteristics and CVR parameters pre- and postintervention. As expected and given the nature of the epidemic in Australia, the majority of patients were male (90.5%) with a median age of 49 years. Prior to the intervention, surprisingly high numbers of patients had not had a blood pressure recorded in the previous 2 years nor been screened for diabetes. Despite awareness of the strong association between cigarette smoking and a number of medical conditions, smoking status had not been documented in one-third of patients.

The intervention led to a significant improvement in screening for diabetes, hypertension and cigarette smoking (Table 1). Yet, although the number of patients...
having routine blood pressure monitoring increased (88% post compared with 65% pre-intervention), this did not translate into increased antihypertensive prescription or improvements in systolic blood pressure (SBP). Pre-intervention 23 participants were on an antihypertensive compared with 17 postintervention (P = 0.291). Twelve participants pre- and 19 postintervention had an SBP at least 140 mmHg, of whom five (41.6%) and 13 (68.0%) participants, respectively, were not receiving any antihypertensive treatment (P = 0.151).

Compliance with guidelines for statin use was high in both periods (94 and 92%, respectively) and there was no change in the number of patients receiving a statin (24% in both periods) or the type of statin prescribed (atorvastatin, rosuvastatin or pravastatin in equal use). Of patients receiving a statin, only eight (17%) had a total cholesterol level less than 4.0 mmol/l (the target currently recommended by the Australian National Vascular Disease Prevention Alliance) [2]. There was also a persisting small percentage of patients who fit criteria for statin therapy but who were not receiving it (6% pre- and 8% postintervention).

Although representing only a small sample of patients from a single centre, our findings are consistent with an audit performed in HIV-positive patients attending General Practices in Australia, which notably found that 25% of hypertensive patients were not on an antihypertensive treatment [3].

As the incidence of AIDS-related complications continues to decrease, the life-expectancy and quality of life of HIV-positive patients will increasingly be determined by the adequacy of the prevention and management of serious non-AIDS events and in particular cardiovascular and renal disease [4]. Our data show that improvements in screening for CVR factors can be achieved with education tools, but these alone were not sufficient to improve the implementation of primary prevention therapies. Perhaps because in this modern era, we are expecting infectious diseases physicians to also be expert cardiologists, endocrinologists and nephrologist when, in truth, a change in the model of HIV care provision may be needed.

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Conflicts of interest

There are no conflicts of interest.


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Response to: the relationship of physical performance with HIV disease and mortality: a cohort study

We would like to congratulate the Journal of AIDS for the publication of the study entitled ‘The relationship of physical performance with HIV disease and mortality: a cohort study’, by Greene et al. [1]. It is a cohort study with a large sample size that reported findings about the impact of HIV infection on physical performance, and consequently, on mortality rates. The results presented are of utmost importance to science because of their clinical and social relevance.

However, some methodological aspects need clarification and should be discussed further.

Although the authors reported that the methodology of the ALIVE project has been described previously by Vlahov et al. [2], some data regarding the characteristics of the study participants are missing. Greene et al. [1] do not present the results related to the period and frequency of injecting drug use by the surveyed population. There is a lack of information about the current use of drugs, pharmacological treatment and average time since diagnosis of HIV infection. These data could provide a better interpretation of the findings, as these variables may be associated with the outcome.

The method used to verify the physical performance, restricted to the balance and activities of the lower limbs, The Short Physical Performance Battery (SPPB), has been validated for the elderly population, but the median age within the study population was 51 years. The authors stated that there was no consensus on the best method to assess physical performance in people infected with HIV and that the SPPB method was suited for young adults. However, this can compromise the findings, as the method was not validated for that population [3].

There are several benefits provided by regular physical activity to HIV-infected people, such as increased lean body mass, bone mineral density and muscle strength, fat percentage reduction and aerobic fitness improvement. These results suggest that physical activity contributes to the development of physical performance [4]. The authors did not measure the level of physical activity and exercise of the study participants.

The BMI was used as a method for assessing obesity in research participants; however, this is not the most appropriate method, given that the BMI does not take into account body composition. The prevalence of HIV-associated lipodystrophy is significant in this population, especially among those individuals receiving antiretroviral therapy [5]. By the way, this is an important information that was not presented by the authors, that is the percentage of participants receiving antiretroviral therapy, including the treatment regimens used and the time of use of antiretroviral drugs. Some classes of antiretroviral drugs – such as the protease inhibitors and reverse transcriptase inhibitors – can cause the loss of peripheral subcutaneous fat (lipodystrophy) and/or central fat accumulation (lipohypertrophy), as well as metabolic changes such as insulin resistance and metabolic syndrome, leading to an increased risk for cardiovascular disease [6]. For this reason, other methods should be used to assess obesity and body-fat distribution. Establishing the diagnosis of lipodystrophy in

References


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