Dear BHIVA,

We write regarding the recent publication of rapid guidance for primary prevention of cardiovascular disease in people living with HIV. In the guidance you quote the recently published REPRIVE study. This sought to address the impact of pitavastatin therapy on low to intermediate risk individuals on a composite outcome of myocardial infarction, hospitalisation for unstable angina, stroke, transient ischaemic attack, peripheral arterial ischaemia, revascularisation of any major artery and all-cause mortality (1). The study demonstrated a significant reduction of the primary outcome in the group randomised to pitavastatin compared to placebo (absolute risk reduction of 2.51% per 1000 patient years p=0.002). Based on this study one of the recommendations from the BHIVA rapid guidance document was to offer a statin to people living with HIV over the age of 40, irrespective of lipid profile or estimated cardiovascular disease risk. In addition, atorvastatin 20mg is recommended as an alternative to pitavastatin.

Predicting cardiovascular risk in people living with HIV has already been established as problematic. Numerous risk calculators, including HIV-specific risk calculators, have been demonstrated to have reduced accuracy and/or are poorly calibrated across a range of risks (2,3). CT coronary angiography (CTCA) is a non-invasive, well established imaging technique that allows visualisation and quantification of coronary plaque. Individuals with no evidence of coronary plaque on CTCA have an extremely low risk of cardiovascular events across a 10-year period (4). These individuals derive no benefit from statin therapy (5). CTCA also provides an opportunity to identify those who are extremely high risk. The overall burden and morphology of atherosclerotic plaque contributes to an individual's risk. Identification of high or very-high risk patterns of disease allows aggressive LDL reduction strategies with high intensity statins and adjuvant agents.

There are inherent benefits and risks with statin therapy and side effects are highly likely to be under reported in the real world (6). Within the REPRIEVE data there were 51 extra incidences of diabetes mellitus in the pitavastatin arm. To put this in context type II diabetes was induced in four participants for each type 1 myocardial infarction prevented (type 1 MI in the statin group was 16 versus 34 in the non-statin group).

In essence, by adopting a statin for all >40 policy, we may be doing our patients a disservice by exposing them to the metabolic risks of statins, with no tangible benefit. If we accurately delineate true cardiovascular risk, by offering a CTCA, we can target individuals who stand to derive risk reduction benefits from statin therapy. From our own clinical experience, and published literature, the incidence of coronary plaque in those <50 years is low (7). In the REPRIEVE CTCA sub-study most individuals, across all risk profiles, had no coronary plaque on CT (8).

As clinicians we can do better than simply administering statins to those >40. CTCA is low risk, low cost, widely accessible and allows demonstration of true CVD risk. Utilisation of CTCA, in perceived low to intermediate risk people, allows clinicians to identify those with an extremely low 10-year CVD risk and target individuals who require intensive LDL-lowering strategies.

We would like to advocate that, in those individuals we are considering statin therapy under the age of 50, we should offer first a CTCA to accurately identify the risk. Furthermore, from our recent audit data of our large regional centre we found 20% of patients with high cardiovascular risk were not currently prescribed statin therapy. By encouraging services to identify and prioritise risk reduction in those with very high cardiovascular risk, it would certainly enhance risk reduction across patient populations.

Despite advances in preventative pharmacotherapy, we should also ensure lifestyle modification remains a core component of risk reduction. Smoking cessation, optimisation of diet, exercise and weight reduction remains crucial to multimorbidity risk reduction and longevity.

Yours Sincerely,

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