REVIEW

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Lipid Management Guidelines from the Departments of Veteran Affairs and Defense: A Critique

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ABSTRACT

In December 2014, the US Department of Veterans Affairs and Department of Defense (VA/DoD) published an independent clinical practice guideline for the management of dyslipidemia and cardiovascular disease risk, adding to the myriad of recently published guidelines on this topic. The VA/DoD guidelines differ from major US guidelines published by the American College of Cardiology/American Heart Association in 2013 in the following ways: recommending moderate-intensity statins for the majority of patients with statin indications regardless of atherosclerotic cardiovascular disease risk; advocating for limited on-treatment lipid monitoring; and deemphasizing ancillary data, such as coronary artery calcium testing, to improve atherosclerotic cardiovascular disease risk estimation. In the context of manifold treatment recommendations from numerous guideline committees, the VA/DoD recommendations may generate further confusion and mixed messages among healthcare providers about the optimal treatment of dyslipidemia. In this review, we critically appraise the VA/DoD recommendations with a focus on the evidence base for each area where the VA/DoD guidelines differ from the American College of Cardiology/American Heart Association guidelines. We also call for harmonization of lipid treatment guidelines to ensure high-quality and consistent care for patients with, and at risk for, atherosclerotic cardiovascular disease.
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Following the 2011 dyslipidemia management guidelines from the European Society of Cardiology (ESC),[1] 2012 lipid guidelines from the Canadian Cardiovascular Society,[2] 2013 American College of Cardiology/American Heart Association (ACC/AHA) cholesterol treatment guidelines,[3] 2014 guidelines from the International Society of Atherosclerosis,[4] and 2015 recommendations of the National Lipid Association,[5] the US Department of Veterans Affairs and Department of Defense (VA/DoD) published an additional clinical practice guideline for the management of dyslipidemia and cardiovascular disease risk reduction.[6] The VA/DoD guidelines were summarized in a synopsis article

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by Downs and O'Mally[7] with the goal of reaching general practitioners and guiding cholesterol management in the primary care setting.[7] However, given the myriad of other dyslipidemia guidelines recently published, it is possible the VA/DoD recommendations could generate confusion and mixed messages about the preferred treatment of dyslipidemia, most notably due to inconsistencies with the major US guideline published by the ACC/AHA in 2013.[8]

In this review article, we argue that widespread implementation of the VA/DoD dyslipidemia guidelines potentially could result in suboptimal management of elevated cholesterol and atherosclerotic cardiovascular disease risk by (1) prioritizing the use of moderate intensity statins for primary and secondary prevention for most patients across a broad range of risk groups (including those with a 10-year risk >12%, a 10-year risk 6%-12% with shared decision making, low-density lipoprotein cholesterol [LDL-C] ≥190 mg/dL, or diabetes with another major risk factor, eg, smoking or hypertension); (2) endorsing a statin treatment strategy that does not incorporate on-treatment LDL-C level monitoring; and (3) deemphasizing the utility of novel atherosclerotic cardiovascular disease risk factors, such as the coronary artery calcium score, to inform statin treatment decisions as part of a clinician–patient risk discussion. Finally, we also discuss our concerns regarding multiple discordant dyslipidemia guidelines that lack harmonization and may confuse providers.

CLINICAL SIGNIFICANCE

- Dyslipidemia guidelines from the US Departments of Veteran Affairs and Defense strongly favor moderate-intensity statin dosing over high-intensity statin dosing, irrespective of risk.
- The guidelines deemphasize lipid monitoring and novel risk markers when therapeutic uncertainty exists (eg, coronary artery calcium).
- These recommendations differ from American College of Cardiology/American Heart Association lipid guidelines, and we appraise their potential drawbacks.
- We call for consensus among lipid guidelines, arguing that multiple and disparate recommendations generate confusion among providers.

RECOMMENDED STATIN INTENSITY: TOO MODERATE

The VA/DoD guidelines do not advocate for high-intensity statin use, even among the majority of high-risk patients. Instead, they recommend no more than moderate-intensity statins for most patients, citing concern for adverse side effects and lack of mortality benefit with high-intensity statins compared with low- or moderate-intensity statins.[9,10] Although they do suggest that high-intensity treatment can be considered as tolerated for patients with recent or recurrent atherosclerotic cardiovascular disease events, they provide little specific guidance. All other patients are recommended to receive moderate-intensity statins, including, for example, individuals with 10-year atherosclerotic cardiovascular disease risk estimates >12%. To determine patients' atherosclerotic cardiovascular disease risk, the VA/DoD guidelines suggest using the Framingham 10-year cardiovascular disease risk calculators or the ACC/AHA atherosclerotic cardiovascular disease risk calculator.[6] This also may cause confusion because each of these risk calculators is calibrated differently and predicts different outcomes. Furthermore, these recommendations are at odds with the ACC/AHA guidelines, which recommend high-intensity statins for the following high-risk groups: secondary prevention patients ≤75 years; persons with LDL-C ≥190 mg/dL; diabetic persons with 10-year atherosclerotic cardiovascular disease risk estimates ≥7.5%; and, when deemed necessary after the clinician–patient risk discussion, all other adults with 10-year atherosclerotic cardiovascular disease risk ≥7.5%.[3]

More important, the VA/DoD recommendation for moderate-intensity statins does not give appropriate weight to the morbidity benefits of high-intensity statins.[11] Indeed, a number of reports, including the meta-analysis cited by the VA/DoD, have shown that high-intensity statins, with or without additional nonstatin LDL-C–lowering therapy, can significantly reduce nonfatal myocardial infarction and stroke in high-risk patients, compared with moderate-intensity statins.[9-13] In addition, prioritizing mortality as the main outcome used to inform the VA/DoD dyslipidemia guideline recommendations may not be entirely appropriate because follow-up in many of the included trials, particularly in primary prevention, was likely not sufficiently long enough to demonstrate a mortality benefit for LDL-C reduction and because the morbidity from nonfatal myocardial infarction and stroke can be devastating.[11,14] To take one example, the mortality benefit derived from statins was not evident in the initial report from the Anglo-Scandinavian Cardiac Outcomes Trial—Lipid Lowering Arm after 3 years of follow-up, but was evident when outcomes were reassessed after 11 years.[15,16] Underscoring this, recent population-level data demonstrate the improvement in both fatal and nonfatal outcomes over approximately 7 years using the risk-based statin allocation strategy recommended by the ACC/AHA guidelines compared with statin allocation determined by trial eligibility (where moderate-intensity statins were often used).[17]

In addition, the excess side effects of high-intensity statins cited by the VA/DoD authors are arguably minimal. Myalgias, the most common side effect of statin use, are almost always benign. Evidence from blinded randomized control studies argues against a causal relationship between