Statins: A Brief Summary

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Summary: Despite a totality of evidence indicating clear benefits of statin therapy in secondary and primary prevention of cardiovascular disease (CVD), a large number of additional trials are currently planned or in progress to help us better understand, treat, and prevent CVD. Both monotherapy and combination statin regimens are being studied to optimize treatment of the total patient and to assess mechanisms and benefits of various components of the total lipid profile.

Key words: totality of evidence, statin, cardiovascular disease, dyslipidemias

It is clear that new and emerging concepts in the treatment of patients with metabolic disorders and/or cardiovascular disease (CVD) provide challenges to both the clinician and the researcher. These concepts include the following:

- Risk of CVD should be managed by treating not just the lipid profile but the global risk of the patient.
- In secondary and primary CVD prevention trials of statin therapy, the totality of evidence indicates decreases in myocardial infarction, stroke, CVD death, and total death.
- Most at-risk patients either are not being treated with statins or are not achieving National Cholesterol Education Program (NCEP) goals.

- Most patients can reach their NCEP goals by lowering low-density lipoprotein cholesterol (LDL-C) levels by 30 to 35%.
- Patients with a metabolic syndrome that includes no elevations of LDL-C but low high-density lipoprotein cholesterol (HDL-C) and/or high triglyceride levels are at high risk for CVD.
- Patients with mixed dyslipidemias may optimally benefit from combination therapy that includes a statin.
- Statins should be the mainstay of therapy for mixed dyslipidemias.
- New formulations of statins, including extended-release preparations, are achieving greater reductions in LDL-C levels as well as favorable modifications of HDL-C and triglyceride concentrations while maintaining an excellent safety profile.
- A once-a-day sustained-release formulation offers potential benefits in compliance as well as benefit-to-risk and benefit-to-cost ratios.

Current research challenges include the following:

- Cardiovascular disease is a complex disease that is affected by environmental as well as genetic factors.
- Ongoing research on the relationship of human genetic variation to CVD may translate in the future into better diagnosis and treatment.

Conclusion

Despite a totality of evidence indicating clear benefits of statin therapy in secondary and primary CVD prevention, a large number of additional trials are currently planned or in progress to help us better understand, treat, and prevent the disease. At present, we should not let the perfect be the enemy of the possible. The wider use of statins as well as the achievement of NCEP guidelines among patients receiving them will have enormous clinical and public health benefit in societies such as the United States where CVD is far and away the leading cause of death.

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