Introduction

This supplement to Circulation has been developed by the International Lipid Information Bureau (ILIB), a group of leading investigators and clinicians in the field of dyslipidemia and atherosclerotic disease. The ILIB is an educational effort intended to supplement the work of governmental and nonprofit organizations in disseminating up-to-date scientific and clinical information, thereby helping to reduce the international burden of cardiovascular disease. ILIB activities serve as a resource for physicians and other medical professionals, the public, and the media. Supported by unrestricted educational grants from Pfizer Inc, the ILIB is an intellectually independent body committed to fair balance in all of its activities.

The current supplement, entitled Atherosclerosis: Evolving Vascular Biology and Clinical Implications, provides state-of-the-art reviews of topics related to the pathophysiology of atherosclerosis, while highlighting the clinical implications of recent and ongoing research efforts in vascular biology. Specific topics and authors are as follows:

“Atherogenic Lipoprotein Particles in Atherosclerosis,” by Drs Rafael Carmena, Patrick Duriez, and Jean-Charles Fruchtart, goes beyond the traditional emphasis on low-density lipoprotein (LDL) cholesterol to describe the role of other lipid/lipoprotein fractions in the initiation and progression of atherosclerosis. The importance of the heterogeneity of LDL particles is also discussed.

“HDL Cholesterol and Protective Factors in Atherosclerosis,” by Drs Gerd Assmann and Antonio M. Gotto, Jr, explores the protective role of high-density lipoprotein (HDL) cholesterol and considers its potential as a target of pharmacological intervention.


“Inflammation in Atherosclerosis and Implications for Therapy,” by Drs Rodolfo Paoletti, Antonio M. Gotto, Jr, and David P. Hajjar, discusses atherosclerosis as an inflammatory process and considers the hypothesis that pharmacologically modifying certain markers of inflammation may help decrease coronary risk.

In their review entitled “The Role of Endothelial Dysfunction in Atherosclerosis,” Drs Jean Davignon and Peter Ganz focus on nitric oxide, a potent vasodilator that mediates a number of vasoprotective effects exerted by the endothelium. They also discuss the effects of statin therapy on vascular function.

Consideration of the vessel wall continues with an article entitled “Measurement of Arterial Wall Thickness as a Surrogate Marker for Atherosclerosis,” by Drs Eric de Groot, G. Kees Hovingh, Albert Wiegmans, Patrick Duriez, Andries J. Smit, Jean-Charles Fruchtart, and John J.P. Kastelein. After reviewing evidence to support the concept that intima-media thickness (IMT) is a valid surrogate marker for clinical events, the authors describe the use of B-mode ultrasound in a study that estimated atherosclerosis progression, as measured by carotid and femoral IMT, from childhood into old age.

This supplement also includes a series of articles on statin therapy. Dr Jean Davignon defines the “Beneficial Cardiovascular Pleiotropic Effects of Statins,” including antiinflammatory, antioxidant, and plaque-stabilizing properties. These pleiotropic effects may act in concert with the drugs’ lipid-lowering mechanism to provide both early and continuing cardiovascular benefit.

“Statins for Stroke Prevention: Disappointment and Hope,” by Drs Pierre Amarenco and Andrew M. Tonkin, examines evidence that statins reduce the incidence of stroke in high-risk patients with coronary heart disease, diabetes mellitus, or hypertension. Possible mechanisms are discussed, and the need for clinical trials in appropriate patient populations, with classification of stroke types, is emphasized.

Finally, Drs Stefano Bellosta, Rodolfo Paoletti, and Alberto Corsini provide an update on “The Safety of Statins: Focus on Clinical Pharmacokinetics and Drug Interactions.” This topic is particularly timely in view of the withdrawal from the world market of cerivastatin (Baycol) and the continuing efforts to develop more powerful lipid-lowering agents, with the attendant concerns about drug safety.

It is my hope, and the hope of my ILIB colleagues, that these articles will stimulate the clinician’s interest in the area of current atherosclerosis research, as well as provide guidance for the use of specific interventions to enhance patient care and help decrease the worldwide burden of morbidity and mortality from coronary heart disease.

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Introduction
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