Preface

Risk Factor Update: Old Wine in a New Bottle?

Valentin Fuster, MD, PhD  Jagat Narula, MD, PhD
Guest Editors

Cardiovascular diseases continue to be the leading cause of death and disability in the twenty-first century and equally affect men and women, in both developed and underprivileged nations. Most human societies have moved from agrarian diets and active lives to fast foods and sedentary habits in the last century. Combined with increasing tobacco use, these changes have fueled the epidemic of obesity, diabetes, hypertension, dyslipidemia, and cardiovascular diseases. Furthermore, while developed countries witnessed these changes over several decades due to a long period of epidemiological transition, the alterations in developing countries are occurring at an accelerated pace, calling into focus creative and innovative solutions for combating the consequences.

Coronary artery disease (CAD) was a national epidemic and the leading cause of death during 1930–1950. Although at that time CAD and acute coronary events were perceived as an inescapable consequence of old age and genetic transmission, epidemiological research, especially from the Framingham Heart Study, identified risk factors that predisposed to CAD. Risk factors were equally applicable at all ages and in either sex; there was a demonstrable causal relationship between the risk factor and the disease with a dose-response relationship to the extent of disease, and a decrease in the burden of disease on resolution of risk factors. Because the disease could be fatal even in its first manifestation and occur without warning signals even in asymptomatic subjects, a preventive approach was deemed mandatory. Immense emphasis was placed on public awareness about the risk factors, and multiple national prevention programs were initiated especially directed against hypercholesterolemia, hypertension, and smoking. More than a 50% reduction was observed in the mortality attributed to cardiovascular diseases in the latter half of the last century, a fivefold superior outcome as compared to noncardiovascular infirmity. However, a large proportion of such benefit was related to the treatment of already manifest disease rather than prevention, resulting in an enormous economic burden.
To maintain a winning streak, it has become mandatory that we emphasize cardiovascular disease prevention and health promotion worldwide. This issue of the *Medical Clinics of North America* is dedicated to readdressing the relevance of recognizing and optimizing the risk factors. Increasingly conservative standards are being established for modifiable risk factors. It is becoming obvious that the *normal* values for risk factors (such as blood pressure and cholesterol) cannot be based on the *average* values for our populations, which are in fact the *commonly prevalent* values for the population at risk of dying from atherosclerotic disease. It is also necessary that we recognize that the burden of cardiovascular disease arises from people with cumulative load imposed by modest elevations of numerous risk factors and not with extreme elevation of a single risk factor. Further, we make an attempt to convince the readers that nonmodifiable predisposing factors may not necessarily be considered fatalistic. For instance, age may not comprise a risk factor but may represent the length of exposure to the risk factor. Similarly for family history, one may usually inherit risk factors and not vascular disease, and prevention of the risk factors should prevent disease.

It has also become mandatory that cross-continental collaboration be established, not only because the developing nations can learn tremendously from the available experience of the last century pertaining to the dynamics of risk factor upregulation and disease burden, but also the developed nations can get access to the accelerated disease pattern to learn the pathogenesis and preventive strategies better. The opportunity to study the same diseases that we witnessed 50 years ago with the modern tools and knowledge promises revolutionary information for health care in our country.

With promotion of cardiovascular health in mind, we hope that this issue of *Medical Clinics* will allow readers to look at the risk factors more aggressively and effectively. It is an extension of the age-old principles. Neither too new a wine nor too new a bottle…

Valentin Fuster, MD, PhD  
Mount Sinai School of Medicine  
1 Gustave L. Levy Place, Box 1030  
New York, NY 10029-6574, USA

Fundación Centro Nacional de Investigaciones Cardiovasculares Carlos III  
Melchor Fernández Almagro, 3  
E-28029 Madrid, Spain

Jagat Narula, MD, PhD  
Mount Sinai School of Medicine  
1 Gustave L. Levy Place, Box 1030  
New York, NY 10029-6574, USA

E-mail addresses:  
valentin.fuster@mountsinai.org (V. Fuster)  
jagat.narula@mountsinai.org (J. Narula)