

Introduction

Managing risk for cardiovascular disease (CVD) and diabetes is of increasing importance to clinicians who strive for optimal outcomes in the health and well-being of their patients. Heightened awareness and interest in the knowledge gained from multiple studies have resulted in the identification of certain cardiovascular risk factors that are prone to cluster, with the term “metabolic syndrome” used to describe this clustering.

The defining components of the metabolic syndrome, according to the Third Report of the National Cholesterol Education Program Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults (Adult Treatment Panel III), are elevated waist circumference, elevated triglycerides, atherogenic dyslipidemia (elevated triglyceride, small low-density lipoprotein [LDL] particles, low high-density lipoprotein [HDL] cholesterol), raised blood pressure, insulin resistance (with or without glucose intolerance), and prothrombotic and proinflammatory states.¹ CVD is viewed as the primary clinical outcome of the metabolic syndrome.¹

An estimated 47 million people living in the United States have the metabolic syndrome, with a calculated age-adjusted prevalence of 23.7%.^{2,3} Studies have found that people with the metabolic syndrome are at increased risk for developing diabetes and CVD, along with increased mortality from CVD and all causes.² The underlying risk factors of the metabolic syndrome appear to be abdominal obesity, physical inactivity, and atherogenic diet; the major risk factors are cigarette smoking, hypertension, elevated LDL cholesterol, low levels of HDL cholesterol, a family history of premature coronary heart disease, and aging.¹ More clinical attention to these underlying and major risk factors, as well as such emerging risk factors as glucose intolerance, insulin resistance, and elevated triglyceride levels, is warranted.¹ This publication presents 7 articles offering information that can be useful to clinicians in managing cardiometabolic risk in their patients.

Cardiometabolic risk assessment is a useful approach for physicians to implement in clinical practice, according to the first article by Abu R. Vasudevan, MBBS, MD, MRCP (UK) and Christie M. Ballantyne, MD. These physician-authors review the findings of relevant studies concerning the identification of specific risk factors for CVD and diabetes mellitus. They further discuss the need to extend routine systematic assessment from cardiovascular risk to cardiometabolic risk (defined as the risk for developing CVD and/or diabetes mellitus).

The second article by Christopher P. Cannon, MD, reports on the significant advances that have been made during the last decade in understanding the complex nature of the endocannabinoid system. A description of interventions that target the endocannabinoid system is provided, which represents a new approach to treating visceral obesity and reducing cardiovascular risk factors.

Atherogenic dyslipidemia is the focus of the third article by Aaron I. Vinik, MD, PhD, FCP, MACP. Dr. Vinik addresses cen-

tral obesity as a prime predictor of coronary heart disease and its association with atherogenic dyslipidemia, and reports on studies that suggest pharmacologic interventions may be beneficial in the treatment of atherogenic dyslipidemia.

The fourth article elucidates the primary goals in the management of patients with the metabolic syndrome, highlighting the need for a global strategy that addresses the underlying factors of abdominal obesity, physical activity, and atherogenic/diabetogenic diet. Therapeutic lifestyle change is regarded as first-line therapy for people with the metabolic syndrome, with an emphasis on weight reduction. The use of pharmacologic agents can be beneficial in treating the specific metabolic abnormalities.

The fifth article by Richard W. Nesto, MD, encourages clinicians to apply their knowledge of cardiovascular risk factors to their patients with the metabolic syndrome. Strategies for identifying at-risk patients and then managing their CVD risk are discussed.

Pharmacotherapy is regarded as an adjunct to diet, exercise, and lifestyle modification in weight management directed at reducing visceral fat, according to George L. Blackburn, MD, PhD, and Belinda A. Waltman, authors of the sixth article in this publication. Dr. Blackburn and Ms. Waltman offer practical advice on encouraging patients to make beneficial lifestyle changes and discuss specific therapeutic strategies for weight loss and management.

The role of obesity in patients with the metabolic syndrome is highlighted in the seventh paper by Vivian A. Fonseca, MD. In addition to discussing the clinical effects of the metabolic syndrome, he outlines various mechanisms of the metabolic syndrome as they relate to cardiometabolic risk. He further reports on specific treatments for the individual components of the metabolic syndrome.

The cluster of risk factors associated with the metabolic syndrome increases the likelihood of CVD. Effective management of cardiometabolic risk is of vital concern to clinicians and their patients.

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Guest Editor

REFERENCES

1. Third Report of the National Cholesterol Education Program (NCEP) expert panel on detection, evaluation, and treatment of high blood cholesterol in adults (Adult Treatment Panel III). Final report. *Circulation*. 2002;106:3143–3421.
2. American Heart Association. *Heart Disease and Stroke Statistics—2005 Update*. Dallas, Tex: American Heart Association; 2005. Available at: <http://www.heart.org/downloadable/heart/1105390918119HDSStats2005Update.pdf>. Accessed October 20, 2005.
3. Ford ES, Giles WH, Dietz WH. Prevalence of the metabolic syndrome among US adults: Findings from the Third National Health and Nutrition Examination Survey. *JAMA*. 2002;287:356–359.