New advances in the management of acute coronary syndromes

Paul W. Armstrong

† See related article page 1309

The first article in a series on new advances in the management of acute coronary syndromes appears on page 1309 of this issue. There have been major advances in our understanding of the pathophysiology of these increasingly common, important and challenging syndromes over the last decade. Along with these advances has been the realization that patients presenting with acute coronary syndromes constitute a heterogeneous group, with different prognostic probabilities for the main outcomes (death, recurrent myocardial infarction and refractory ischemia) on the one hand and a more benign long-term outcome on the other.

It seems especially timely to address the problem of acute coronary syndromes, because clinical practitioners in family medicine, internal medicine and emergency medicine as well as those in cardiovascular medicine and surgery face increased numbers of such patients who present with chest pain. These patients are often well informed, and many have increased expectations based on their positive experiences with prior medical therapy or revascularization. This phenomenon occurs at a time when there are a host of new pharmacologic therapies and interventional strategies available. Together they form an impressive and complex array of choices, which carry with them major economic implications for our health care system. Moreover, the intense pressure on Canadian emergency departments coupled with a marked reduction in the number of hospital beds across the country creates a compelling need to make rapid and cost-effective decisions that serve the care of these patients well.

Hence, in the first article in this series, on facilitating and matching risk factors with therapeutic strategies, David Fitchett and colleagues alert readers to a systematic process of risk evaluation when patients first present with an acute coronary syndrome. They also emphasize opportunities that exist for continuously evaluating risk during the first few hours of observation and beyond. Incorporating simple clinical data and novel diagnostic biochemical markers facilitates this task.

Fitchett and colleagues provide a useful platform from which to interpret subsequent articles in the series, which will address the following topics: the development of low-molecular-weight heparins and other antithrombin agents, which offer useful advantages over conventional unfractionated heparin; the emergence of new compounds that inhibit platelet aggregation, thereby addressing the platelet-rich component of coronary thrombi and the recently recognized role of platelet emboli to the distal coronary vascular tree; new pharmacologic approaches to coronary fibrinolysis for acute myocardial infarction with ST-segment elevation, which, coupled with antiplatelet and antithrombin therapy, are creating a new treatment paradigm (primary mechanical intervention with percutaneous transluminal coronary angioplasty and its effectiveness in patients who do not respond to pharmacologic intervention has made significant strides as well); and the remarkable advances in catheter technology and the advent of intracoronary stenting. A particular challenge with this last topic is the optimal patient selection and timing of the interventions as well as
their appropriate interface with the new drug therapies. 9

Canada has made significant contributions to the basic and clinical research of a number of the treatment advances discussed in this series. This welcome occurrence, coupled with the participation of not only academic centres but also many community hospitals across the country, has resulted in a growing appreciation of our role in key international collaborative endeavours.

We hope that this series will not only be informative about this rapidly changing area of medicine but that it will also generate interest and dialogue and result in improved patient care.

Dr. Armstrong is Professor in the Department of Medicine (Cardiology) at the University of Alberta, Edmonton, Alta.

Competing interests: None declared.

References


Correspondence to: Dr. Paul W. Armstrong, 2-51 Medical Sciences Building, University of Alberta, Edmonton AB T6G 2H7; paul.armstrong@ualberta.ca

### CMAJ Index

An index to each volume of *CMAJ* is mailed to paid subscribers and to CMA members who request it from CMA Member Service Centre. Others may order single copies for $15 (Canadian subscribers add 7% GST/15% HST as applicable) or US$15 (outside Canada).

**CMA Member Service Centre**
1867 Alta Vista Dr.
Ottawa ON K1G 3Y6
tel 888 855-2555 or 613 731-8610 x2307
fax 613 236-8864
cmamsc@cma.ca

### L’index du JAMC

Les abonnés en règle et les membres de l’AMC qui en font la demande auprès du Centre des services aux membres de l’AMC reçoivent un index de chaque volume du *JAMC*. Les autres personnes intéressées peuvent se procurer l’index au prix de 15 $ l’unité (plus TPS de 7 % ou TVH de 15 %) au Canada et de 15 $US ailleurs.

**Centre des services aux membres de l’AMC**
1867, prom. Alta Vista
Ottawa ON K1G 3Y6
tél 888 855-2555 ou 613 731-8610 x2307
fax 613 236-8864
cmamsc@cma.ca