

## New advances in the management of acute coronary syndromes

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The first article in a series on new advances in the management of acute coronary syndromes appears on page 1309 of this issue.<sup>1</sup> There have been major advances in our understanding of the pathophysiology of these increasingly common, important and challenging syndromes over the last decade.<sup>2</sup> 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.<sup>3,4</sup>

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.<sup>5</sup>

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;<sup>6</sup> 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;<sup>7</sup> 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<sup>8</sup>); 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.<sup>9</sup>

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.

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Competing interests: None declared.

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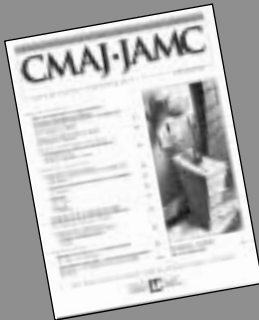
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