Janda SP, Tan N. Thrombolysis versus primary percutaneous coronary intervention for ST elevation myocardial infarctions at Chilliwack General Hospital. *Can J Cardiol* 2009;25(11):e382-4.

To the Editor:

DEVELOPING A SYSTEM OF CARE FOR EMERGENCY REVASCULARIZATION IN ACUTE MYOCARDIAL INFARCTION

Janda and Tan (1) retrospectively identified 67 patients who presented to Chilliwack General Hospital (Chilliwack, British Columbia) with ST segment elevation myocardial infarction (STEMI) in 2004/2005; 27 of these patients did not receive any type of reperfusion therapy and the rest were included in the report. While the methodology briefly describes how these patients were identified, there is a great deal of discrepancy between the reported data and that obtained from the prospective registry of all emergency patients undergoing cardiac catheterization at the Royal Columbian Hospital in Westminister, British Columbia – the regional tertiary cardiac centre. This registry, which has been in place since the inception of the regional primary infarct angioplasty in 2003, identifies 31 patients (21 primary percutaneous coronary interventions [PCIs] and 10 rescue PCIs) referred from Chilliwack General Hospital during the study period, in contrast to the reported eight patients in the article. Furthermore, the study did not provide any baseline comparison of the clinical presentation of the thrombolytic and primary PCI groups, and potential selection biases against the primary PCI group were not addressed in the article. The fact that the majority of the patients with the longest door-to-reperfusion times required an internist consultation suggested that there was significant heterogeneity within the study population, leading to delays in recognition of the infarct electrocardiographic pattern by the emergency physicians, referral, and acute management. Moreover, the clinical outcomes of the two groups

(eg, 30-day mortality, left ventricular function, arrhythmia, etc) were not included in the study; approximately 40% of patients achieved less than Thrombolysis In Myocardial Infarction (TIMI) 3 flow after thrombolysis in clinical trial and might require rescue angioplasty (2).

The time of equipoise between primary PCI and thrombolysis is often difficult to determine in the real-world setting. An analysis of hospitals from the National Registry of Myocardial Infarction hospitals (3) suggested that, in unselected STEMI, the determination of reperfusion strategy should take into account the patient's characteristics, and the time of equipoise for early presentation infarcts may vary from 40 min to 3 h. It is clear that a major source of time delay occurs in the emergency room for a variety of reasons. For patients presenting directly to the emergency room with STEMI, optimization of the treatment algorithm that includes a strategy of primary PCI and selected facilitation will be in the patient's best interests. The Fraser Health Authority in British Columbia is in the process of developing prehospital identification of STEMI patients for rerouting, to increase the number of patients with timely access to primary PCI.

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