Serum Myoglobin in Pulmonary Embolism

To The Editor:

N. Kucher and S.Z. Goldhaber discuss the potential role of cardiac troponins and brain natriuretic peptides in the risk stratification of patients with acute pulmonary embolism (APE).1 Increased levels of cardiac troponins indicate myocardial damage in an overloaded right ventricular myocardium. Interestingly, right ventricular infarctions were reported in patients who died from massive APE2 and in survivors with angiographically normal coronary arteries.3 Myoglobin, a highly sensitive marker of myocardial injury, can be elevated after myocardial damage, even before any detectable rise of cardiac troponin levels occurs.4 However, to our knowledge, measurement of serum myoglobin levels has not been evaluated in APE. Therefore, we checked the prevalence and prognostic significance of elevated serum myoglobin levels in 46 patients with major APE.5 Our study showed that on admission, myoglobin serum concentrations are elevated in 45% of APE patients. All 7 in-hospital deaths occurred in the group with elevated serum myoglobin, and in one fatal case, cardiac troponin T measured simultaneously was negative. Moreover, elevated serum myoglobin was a significant predictor of fatal outcome (odds ratio 25, 95% confidence interval 1.3 to 474.2). We think that both cardiac troponins and myoglobin, a biochemical marker of myocardial injury, are powerful predictors of increased risk of fatal outcome in major pulmonary embolism.

Anna Bochowicz, MD
Maciej Kostrubiec, MD
Piotr Pruszczyk, MD
Department of Internal Medicine and Hypertension
The Medical University of Warsaw
Banacha 1a
02–096 Warsaw, Poland
piotr.pruszczyk@amwaw.edu.pl

Serum Myoglobin in Pulmonary Embolism
Anna Bochowicz, Maciej Kostrubiec and Piotr Pruszczyk

Circulation. 2004;109:e194
doi: 10.1161/01.CIR.0000127106.85030.4A

The online version of this article, along with updated information and services, is located on the World Wide Web at:
http://circ.ahajournals.org/content/109/16/e194

Permissions: Requests for permissions to reproduce figures, tables, or portions of articles originally published in Circulation can be obtained via RightsLink, a service of the Copyright Clearance Center, not the Editorial Office. Once the online version of the published article for which permission is being requested is located, click Request Permissions in the middle column of the Web page under Services. Further information about this process is available in the Permissions and Rights Question and Answer document.

Reprints: Information about reprints can be found online at:
http://www.lww.com/reprints

Subscriptions: Information about subscribing to Circulation is online at:
http://circ.ahajournals.org//subscriptions/