Correspondence

Enhanced Inflammatory Response to Coronary Angioplasty in Patients With Severe Unstable Angina

To the Editor:

We read with interest the recent article by Liuzzo et al concerning the enhanced inflammatory response to PTCA in patients with severe unstable angina. They found that PTCA induced an increase in plasma interleukin-6 (IL-6) levels in patients with severe unstable angina, but IL-6 levels did not change after PTCA in stable patients.

We previously reported that plasma IL-6 levels become elevated in patients with acute myocardial infarction and that IL-6 mRNA is expressed in human atherosclerotic lesions. Therefore, we propose that the main source of plasma IL-6 in coronary artery diseases is the vascular tissue. Recently, we measured the levels of IL-6 and von Willebrand factor (vWF), a marker of endothelial injury, in the coronary sinus blood of patients with stable angina. Blood samples were taken from the coronary sinus immediately before and after and 4 and 24 hours after either PTCA (group A; n=52) or diagnostic coronary angiography (group B; n=7). Levels of IL-6 and vWF in the coronary sinus blood did not change in group B after coronary angiography. Conversely, in group A, the levels of IL-6 and vWF increased significantly 4 hours after the procedure from the baseline value of 3.34±0.56 to 8.20±0.63 pg/mL (P<0.01) and from 113±6.2% to 130±7.3% (P<0.01), respectively, and reached peak values at 24 hours (13.2±1.20 pg/mL and 139±7.4%, both P<0.01 versus baseline). Furthermore, there was a significant positive correlation between IL-6 and vWF levels in the coronary sinus blood at both 4 hours (r=0.38, P<0.01) and 24 hours (r=0.43, P<0.01), suggesting that the mechanism of increased IL-6 after PTCA is related in part to local vascular injury.

Although Liuzzo et al found an increase in plasma IL-6 levels after PTCA only in patients with severe unstable angina, we suspect that if blood samples were drawn from the coronary sinus rather than the peripheral vein, more definite conclusions regarding the involvement of inflammatory cytokines in the pathogenesis of acute coronary syndrome could be obtained.

Uichi Ikeda, MD
Yukihiro Hojo, MD
Takaaki Katsuki, MD
Kazuyuki Shimada, MD
Department of Cardiology
Jichi Medical School
Tochigi, Japan

Enhanced Inflammatory Response to Coronary Angioplasty in Patients With Severe Unstable Angina
Uichi Ikeda, Yukihiro Hojo, Takaaki Katsuki and Kazuyuki Shimada

Circulation. 1999;100:e96
doi: 10.1161/01.CIR.100.19.e96

Circulation is published by the American Heart Association, 7272 Greenville Avenue, Dallas, TX 75231
Copyright © 1999 American Heart Association, Inc. All rights reserved.
Print ISSN: 0009-7322. Online ISSN: 1524-4539

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/100/19/e96

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/