Uric Acid and Prognosis in Chronic Heart Failure

To the Editor:

We read with interest the article by Anker et al.1 exploring the potential role of uric acid as a marker of prognosis in patients with chronic heart failure (CHF). We recently completed a 5-year follow-up of a study with the specific and predefined aim of exploring the prognostic role of electrical, autonomic, metabolic, and hemodynamic abnormalities in ambulant patients with CHF.2,3 Although Anker et al.1 report some interesting and potentially important findings, we have some concerns, as follows.

(1) For a study exploring the utility of different variables in prognosis, one should establish a priori which variables are to be assessed, and all of these variables should be included in subsequent analyses. Was this performed in the present study, and if so, were the 7 variables in the multivariate analysis the only measurements selected?

(2) In a study such as this, patients should be recruited consecutively to remove any bias due to patient selection. In the derivation study of Anker et al.,1 112 patients were recruited over 5 years, suggesting that a significant number of patients were excluded; details of these patients should be provided. Similarly, in the validation group, bias may be introduced because these particular patients had uric acid measured and may not be representative of the usual CHF population who did not have uric acid measured.

(3) In the United Kingdom Heart Failure Evaluation and Assessment of Risk Trial (UK-HEART), of 553 patients consecutively recruited with mild to moderate CHF, the range of creatinine was 60 to 340 μmol/L. We4 and others5 have shown that renal function assessed using creatinine or glomerular filtration rate is a strong, independent predictor of mortality in patients with CHF. Anker et al.1 did not include patients with significantly increased creatinine in their study. This raises a number of important points. By excluding patients with high creatinine levels, one cannot automatically apply the findings to all CHF patients (particularly those with end-stage cardiac failure being considered for transplantation), many of whom will have substantially worse renal function than the patients described. Finally, did the relatively small number of highly selected patients lead to the failure of renal function to predict outcome?

The study of Anker et al.1 is an important attempt to establish uric acid as a marker of adverse prognosis in CHF. However, its design and the highly selected population mean that until the results are validated prospectively in an adequately powered trial, one should be cautious about transferring these results into clinical practice.

Mark T. Kearney, MD
James Nolan, MD
For the UK-HEART Study Investigators

Department of Cardiology,
GKT School of Medicine
London
Cardiothoracic Centre,
North Staffordshire Infirmary
Stoke on Trent
United Kingdom
mark.earney@kcl.ac.uk

Acknowledgment

Dr Kearney is supported by the British Heart Foundation.

Uric Acid and Prognosis in Chronic Heart Failure
Mark T. Kearney and James Nolan
For the UK-HEART Study Investigators

Circulation. 2003;108:e148
doi: 10.1161/01.CIR.0000100883.13505.00
Circulation is published by the American Heart Association, 7272 Greenville Avenue, Dallas, TX 75231
Copyright © 2003 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/108/21/e148

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/