Treatment of Hyperuricemia in Essential Hypertension

To the Editor:

The 2 recent articles linking an elevated serum uric acid level with an increased risk of developing hypertension are of great interest.1,2 The application of the key finding in these 2 studies, that is, a graded increase in risk of developing essential hypertension based on the serum uric acid level, is likely to be more far reaching than earlier reports because of the larger sample size, longer follow-up period, and the comprehensive adjustment for confounding variables, such as age, body mass index, smoking, plasma lipid levels, serum glucose concentration, and renal function. This will lead to the inevitable discussion of whether treatment to lower serum uric acid can favorably impact on the natural history of essential hypertension and the complications of a sustained high blood pressure level. Before clinicians embark on this course of action, caution would be warranted based on studies that I conducted on the effect of allopurinol treatment in the spontaneously hypertensive rat.3 I demonstrated that administration of allopurinol (100 mg/kg of body weight per day) for 15 weeks had no impact on the development of hypertension in this strain. Moreover, compared with the control Wistar–Kyoto rat strain, allopurinol was associated with significant nephrotoxicity characterized by impaired somatic and kidney growth, azotemia, and significant tubulointerstitial injury. Therefore, I recommend that uric acid–lowering therapies be assessed systematically in well-designed clinical trials with sufficient long-term observation to detect the effect of treatment on blood pressure. In addition, adequate safety precautions should be incorporated into the protocol design for detection of renal dysfunction and other unanticipated adverse events to insure that the risk:benefit ratio justifies continuation of the test therapy.

None.

Howard Trachtman
Division of Nephrology
Schneider Children’s Hospital of North Shore–LIJ Health System
New Hyde Park, NY

Treatment of Hyperuricemia in Essential Hypertension
Howard Trachtman

Hypertension. 2007;49:e45; originally published online March 26, 2007;
doi: 10.1161/HYPERTENSIONAHA.107.089789

Hypertension is published by the American Heart Association, 7272 Greenville Avenue, Dallas, TX 75231
Copyright © 2007 American Heart Association, Inc. All rights reserved.
Print ISSN: 0194-911X. Online ISSN: 1524-4563

The online version of this article, along with updated information and services, is located on the
World Wide Web at:
http://hyper.ahajournals.org/content/49/6/e45

Permissions: Requests for permissions to reproduce figures, tables, or portions of articles originally published in Hypertension 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 Hypertension is online at:
http://hyper.ahajournals.org//subscriptions/