should examine potential long-term harmful effects to various organs, including the heart, particularly when hyperconditioning is used.

Jenny Szu-Chin Pan, MD
David Sheikh-Hamad, MD

Author Affiliations: Department of Medicine, Baylor College of Medicine, Houston, Texas.

Corresponding Author: David Sheikh-Hamad, MD, Section of Nephrology, Department of Medicine, Baylor College of Medicine, One Baylor Plaza, Houston, TX 77030 (sheikh@bcm.tmc.edu).

Conflict of Interest Disclosures: The authors have completed and submitted the ICMJE Form for Disclosure of Potential Conflicts of Interest and none were reported.


To the Editor We wish to retract the article "Effect of Ramipril on Walking Times and Quality of Life Among Patients With Peripheral Artery Disease and Intermittent Claudication: A Randomized Controlled Trial," published in the February 6, 2013, issue of JAMA.1 A recent internal subanalysis of these data revealed anomalies, which triggered an investigation and an admission of fabricated results by Anna A. Ahimastos, PhD, who is both the first and corresponding author and was responsible for data collection and integrity for the article. No other coauthors were involved in this misrepresentation. In particular, the data collected at the Townsville and Brisbane sites remain valid. Given the current indications for ramipril, we do not believe that patients have been adversely affected.

All authors recognize the seriousness of this issue and apologize unreservedly to the editors, reviewers, and readers of JAMA. A system of good clinical practice was in place; however, clinical governance and audit procedures will be reviewed and strengthened to minimize the chance of possible recurrence of such behavior. We are also in the process of examining other studies for which Dr Ahimastos had oversight of data collection and integrity.

We sincerely regret that this study has been compromised. We feel deeply disappointed and let down by this
This intervention, which is composed of cycles of transient limb ischemia and reperfusion using a standard blood pressure cuff, is a simple, inexpensive, and potentially highly effective therapy that has been shown in proof-of-principle randomized clinical trials (RCTs) to improve (1) myocardial salvage after percutaneous coronary intervention in ST-elevation myocardial infarction; (2) early, mid-term, and long-term outcomes after elective percutaneous coronary intervention (ie, markers of cardiac damage and improved long-term outcomes after cardiac surgery); and (3) the rate and extent of recovery when administered to patients twice daily for 300 days after stroke.

Remoprotection can now be added to the list of potentially beneficial effects of remote ischemic preconditioning. Even though we agree with Pan and Sheikh-Hamad that further research will help define the role of remote ischemic preconditioning as a therapeutic tool in terms of both potential risks and benefits, we find their concerns regarding the possible risk of it inducing cardiac damage difficult to reconcile with the available data.

Their concern appears to be based on data showing reduced cardiac function after 30 minutes of bilateral renal ischemia in mice. The relevance of this observation to the effects of transient episodes (5 minutes) of ischemia and reperfusion of a limb is unclear.

To the contrary, transient renal ischemia (4 cycles of 5 minutes of renal ischemia followed by 5 minutes of reperfusion) has been shown to be cardioprotective in rodent models.

Furthermore, not only has remote ischemic preconditioning using transient limb ischemia been shown to be cardioprotective in multiple animal models and numerous human studies, but many thousands of patients have been included in RCTs with no major adverse effects reported.

Compared with the risk profile of many new drugs, remote ischemic preconditioning appears to be a particularly innocuous therapy with a remarkable risk-benefit profile. Large-scale, multicenter RCTs are already under way, which should refine understanding of both the benefits and potential unwanted effects of remote ischemic preconditioning.

Although we do not discount the possibility of harms of remote ischemic preconditioning being discovered in the future, we believe such concerns should be hypothesized based on relevant experimental evidence and discussed in the context of analysis of the available data.

Andrew Redington, MD
Christopher Caldarone, MD

Remote Ischemic Preconditioning and Postoperative Renal Dysfunction

To the Editor: The Editorial by Drs Pan and Sheikh-Hamad1 accompanied the study by Zarbock et al2 showing a beneficial effect of remote ischemic preconditioning on the incidence of postoperative renal dysfunction in high-risk patients undergoing cardiac surgery.