

Authors reply

To the Editor,

We thank Dr. Kalaycı and their colleagues for their special interest in our study,^[1] which demonstrates a positive correlation between serum asymmetric dimethyl-L-arginine (ADMA) and serum creatinine change after contrast exposure. Our study also found serum ADMA level to be an independent predictor for the development of contrast-induced nephropathy (CIN).

The first comment refers to the potential relation between blood glucose levels and ADMA levels. As we emphasized in our article, ADMA level (and also diabetes mellitus [DM]) was found as an independent predictor of CIN by using a multivariate logistic regression model. When we included serum glucose level in our statistical analyses, results were unchanged, showing ADMA is still an independent predictor, irrespective of serum glucose level.

The second comment was that organic nitrates were not mentioned in the medications. We agree with the authors that the medications that are effective on nitric oxide (NO) bioavailability may lead to a decreased CIN ratio because increased NO may protect the renal medulla from toxicity of a radiocontrast agent.^[2] In the literature, it has been demonstrated that various cardiovascular drug groups, such as statins, some beta-blockers, and organic nitrates, may have an effect on NO bioavailability.^[2-5] However, in our study, there was no significant difference between the CIN (+) group and CIN (-) group with regard to organic nitrates or other reported drugs. Twenty-four (30%) patients in the CIN (-) group and 3 (30%) patients in the CIN (+) group were taking organic nitrates ($p=0.065$). In addition, although ADMA levels in patients taking organic nitrates (83.7 ng/ml [56.3-135]) were lower

than in patients not taking this medication (94.3 ng/ml [71.2-143.3]), this difference did not reach a statistically significant level ($p=0.191$).

Thank you for your appropriate and valuable comments.

Özgür Günebakmaz, M.D., Mustafa Duran, M.D.,[#] Ekrem Karakaya, M.D.,* Esen Tanrıku, M.D.,[†] Mahmut Akpek, M.D.,* Ali Ergin, M.D.,* Mehmet Güngör Kaya, M.D.*

Department of Cardiology, Harran University Faculty of Medicine, Sanliurfa;

[#]Department of Cardiology, Kayseri Training and Research Hospital, Kayseri;

*Department of Cardiology, Erciyes University Faculty of Medicine, Kayseri;

[†]Department of Biochemistry, Erciyes University Faculty of Medicine, Kayseri, Turkey

e-mail: drmgkaya@yahoo.com

Conflict-of-interest issues regarding the authorship or article: None declared

References

1. Günebakmaz O, Duran M, Karakaya E, Tanrıku E, Akpek M, Ergin A, et al. Increased serum asymmetric dimethylarginine level is an independent predictor of contrast-induced nephropathy. *Türk Kardiyol Dern Arş* 2013;41:581-8.
2. Stacul F, Adam A, Becker CR, Davidson C, Lameire N, McCullough PA, et al. Strategies to reduce the risk of contrast-induced nephropathy. *Am J Cardiol* 2006;98(6A):59K-77K.
3. Toprak O, Cirit M, Tanrısev M, Yazici C, Canoz O, Sipahioglu M, et al. Preventive effect of nebivolol on contrast-induced nephropathy in rats. *Nephrol Dial Transplant* 2008;23:853-9.
4. Günebakmaz O, Kaya MG, Koc F, Akpek M, Kasapkara A, Inanc MT, et al. Does nebivolol prevent contrast-induced nephropathy in humans? *Clin Cardiol* 2012;35:250-4.
5. Li H, Wang S. Organic nitrates favor regression of left ventricular hypertrophy in hypertensive patients on chronic peritoneal dialysis. *Int J Mol Sci* 2013;14:1069-79.