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Higher Pentraxin-3 Level in Patients with Metabolic Syndrome

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It was with great interest that we read the article, ‘Serum pentraxin-3 levels are associated with the severity of metabolic syndrome’, by Karakas et al. [1]. They aimed to investigate the relationship between the level of pentraxin-3 (PTX-3) and the severity of metabolic syndrome (MS) as a novel, simple and reliable indicator of inflammation. They showed that patients with MS had significantly higher PTX-3 high-sensitivity C-reactive protein (hs-CRP) levels compared to those without MS. Furthermore, PTX-3 increased as the severity of MS increased. A strong positive correlation was revealed between the severity of MS and PTX-3 and between the severity of MS and hs-CRP. In addition, the correlation analysis revealed a positive correlation between hs-CRP and PTX-3 in the patient population. The study was successfully planned and reported. We believe that these findings will enlighten further studies concerning the association between the severity of MS and PTX-3. We thank the authors for their contribution.

MS complex is one of the most important problems in the world [2]. It consists of components including glucose intolerance, abnormal lipid profile, hypertension and abdominal obesity. MS has been shown to be related to atherosclerosis [3] and cardiovascular disease [4]. PTX-3 is a recent candidate immunoinflammatory marker that has been reported to be associated with cardio-

metabolic risk factors and to predict adverse outcomes in individuals with cardiovascular disease [5].

Some comments may be of interest. Although the authors have shown that patients with MS had significantly higher PTX-3 levels compared to those without MS, some other factors affecting this marker such as untreated or uncontrolled hypertension and diabetes, any abnormality in thyroid function tests and malignancy were not mentioned in this study. In addition, the authors could have added an MS subgroup analysis based on leukocytes, neutrophils, lymphocytes and liver function test that might have affected the results of the study. Equally, an increase in PTX-3 level in a patient may be related to alcohol usage. Therefore, it would have been better if the authors had given information about alcohol usage.

Finally, PTX-3 alone without other inflammatory markers may not give information to clinicians about the endothelial inflammatory condition of the patient. We, therefore, think that it should be evaluated together with other serum inflammatory markers such as CRP in the daily clinical practice.

References

- 1 Karakas MF, Buyukkaya E, Kurt M, et al: Serum pentraxin-3 levels are associated with the severity of metabolic syndrome. *Med Princ Pract*, E-pub ahead of print.
- 2 Sorkhou EI, Al-Qallaf B, Al-Namash HA, et al: Prevalence of metabolic syndrome among hypertensive patients attending a primary care clinic in Kuwait. *Med Princ Pract* 2004;13:39–42.
- 3 Babusik P, Duris I: Comparison of obesity and its relationship to some metabolic risk factors of atherosclerosis in Arabs and South Asians in Kuwait. *Med Princ Pract* 2010;19:275–280.
- 4 Williams S, Cunningham E, Pories WJ: Surgical treatment of metabolic syndrome. *Med Princ Pract* 2012;21:301–309.
- 5 Unlu M, Karaman M, Ay SA, et al: The comparative effects of valsartan and amlodipine on vascular microinflammation in newly diagnosed hypertensive patients. *Clin Exp Hypertens*, E-pub ahead of print.

Reply

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We would like to thank Dr. Balta and colleagues for reading our paper entitled ‘Serum pentraxin-3 levels are associated with the severity of metabolic syndrome’ [1]. We agree that many conditions are known to associate with inflammation as you pointed out. However, regarding our study, all the patients were taken from the outpatient clinics. They had a thorough physical examination and detailed laboratory tests. Hypertensive and diabetic patients were

on appropriate drugs and at the end of their visits necessary adjustments were made to the medications if necessary. Although not mentioned in the Results section, both TSH and liver function levels were within normal limits in all the patients and were statistically not significant between the groups ($p = 0.28$). We accept that we should have mentioned these in the Results section. Metabolic syndrome subgroup analysis based on leukocyte, neutrophil and

lymphocytes was not done because we consider such an analysis to be the subject of a separate study, considering the fact that neutrophil/lymphocyte ratio was considered as an inflammatory marker as well. In fact, in a recent study it was reported that neutrophil/lymphocyte ratio was associated with the severity of metabolic syndrome [2]. We agree that it would have been better if details about chronic alcohol usage or malignancy had been mentioned. However, if our patients had chronic alcohol usage or advanced stage malignancy these would have been detected through the physical examination or abnormal laboratory test results. Please note that we did not include any patients with hepatic or renal disease in this study.

Regarding the usage of pentraxin-3 (PTX-3) in combination with other well-known inflammatory markers, we would like to point out that we have just shown that PTX-3 is a novel inflammatory marker and, therefore, we could not have studied it in combination with other markers.

References

- 1 Karakas MF, Buyukkaya E, Kurt M, et al: Serum pentraxin-3 levels are associated with the severity of metabolic syndrome. *Med Princ Pract*, E-pub ahead of print.
- 2 Buyukkaya E, Karakas MF, Karakas E, et al: Correlation of neutrophil to lymphocyte ratio with the presence and severity of metabolic syndrome. *Clin Appl Thromb Hemost*, E-pub ahead of print.

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