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Author`s Reply

To the Editor,

We would like to thank the authors for their comments on our article entitled "An increase in epicardial adipose tissue is strongly associated with carotid intima-media thickness and atherosclerotic plaque, but LDL only with the plaque." published in Anatol J Cardiol 2017; 17: 56-63(1) in their letter entitled "Inflammatory activity of adipose tissue." Visceral obesity is strongly associated with atherosclerosis. Even though waist circumference and body mass index (BMI) are the most common assessment methods of total visceral adipose tissue and cardiometabolic risk, these methods lack direct measurement of adipose tissue and seem to have better correlation to subcutaneous fat, rather than visceral fat. This may explain why BMI was related to carotid intima-media thickness (CIMT) in univariate analysis, but not an independent variable in multivariate analyses in our study.

The metabolically healthy obese phenotype and the metabolically unhealthy non-obese phenotype may possibly blunt the predictive power of BMI for CIMT. Perivascular adiposity is primarily related to visceral adipose tissue, which is not necessarily related to increased BMI.

In our personal opinion, the liver may have a central role in determining visceral or subcutaneous adiposity. Genetic determinants, diet, and physical activity may have some role in some specific liver functions, which determine lipid influx from the bloodstream, lipid synthesis in liver, and efflux to subcutaneous tissue or visceral organs. Healthy and unhealthy obese and non-obese phenotypes that have isolated increase in EAT may help us to understand precise roles of EAT in vascular disease.

Additional data would be required in order to clarify the diagnostic role of EAT in managing obese and non-obese patients, and to decrease cardiometabolic risk.

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Predictors of postoperative atrial fibrillation after coronary artery bypass grafting surgery

To the Editor,

We read the article written by Geçmen et al. (1) titled "SYNTAX score predicts postoperative atrial fibrillation in patients undergoing on-pump isolated coronary artery bypass grafting surgery" published in Anatol J Cardiol 2016;16:655-61 with great interest. In their study, the authors reported that there was an independent association between age, chronic obstructive pulmonary disease, and SYNTAX score in predicting postoperative atrial fibrillation. We would like to emphasize some important points about this well-written study.

It has been demonstrated that volume overload could increase postoperative atrial fibrillation incidence by elevating intraatrial pressure (2). It has also been reported that increased cross-clamp and cardiopulmonary bypass time could increase risk for postoperative atrial fibrillation (3). We think that intraoperative factors should be taken into consideration when evaluating these patients.

Another important point is that body mass index, presence of metabolic syndrome, and waist-to-hip ratio are important markers for coronary artery disease, and moreover, obesity is associated with higher levels of inflammatory cytokines in circulation (4). As inflammation has been shown to cause deterioration in atrial conduction and predispose patients to develop atrial fibrillation postoperatively, authors should state these factors for each group (5).

In our opinion, to verify whether SYNTAX score is an important predictor of postoperative atrial fibrillation development, the

above-mentioned points should be evaluated and included in the statistical analysis. It would be helpful if the authors provide this information.

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Tissue Doppler assessment of left ventricular function in asymptomatic diabetic patients

To the Editor,

Left ventricular diastolic dysfunction (LVDD) is very common in the diabetic population, even in the absence of coronary artery disease, valve pathology, or hypertension. It is an indicator of myocardial damage before heart failure becomes apparent and serves as a predictor of adverse cardiac events. Hence, early identification of myocardial dysfunction and correction of potentially modified risk factors are very important in order to delay the onset of heart failure. Unfortunately, subclinical cardiomyopathy is often still unrecognized in asymptomatic diabetic patients (1). Tissue Doppler imaging (TDI) is a non-invasive cardiac imaging technique that measures the velocity of the longitudinal motion of the mitral annulus and has the capability for early detection of LVDD (2).

A total of 48 patients were included in a cross-sectional, single-center study. Twenty-five asymptomatic patients with diabetes mellitus type 2 (DM) comprised the target (diabetic) group, and the control group included 23 patients with hyperlipidemia and obesity but without DM. All patients underwent echocardiographic analysis [conventional pulsed-wave (PW) Doppler echocardiography and TDI] of left ventricular function. We compared the results of both techniques and demonstrated that TDI is superior to PW Doppler in early detection of subclinical left ventricular diastolic dysfunction ($z=2.02$; $p<0.04$).

Also, we noted statistically significant reduction of E´ wave in diabetic group versus control group ($p<0.04$). The advantages of TDI over PW Doppler have also been demonstrated in other studies (3).

We evaluated the relationship of LVDD to various risk factors: age, gender, duration of DM, glycated hemoglobin (HbA1c), lipid profile, and obesity indices body mass index (BMI), body surface area (BSA), and waist-to-hip ratio (WHR).

Patients with poor glycemic control (HbA1c >7%) had higher prevalence of LVDD than patients with HbA1c <7% ($z=-4.3$; $p<0.004$). LVDD was significantly higher in patients with longer duration of DM (up to 5 years) ($p<0.001$), in patients older than 40 years of age ($p<0.000$), in female gender ($p<0.001$), and obesity indices of BMI and BSA ($p<0.000$; $p<0.000$). Statistically significant relationship was also found in control group between LVDD and age, female gender, and obesity indices of BMI and WHR ($p<0.002$; $p<0.004$; $p<0.002$; $p<0.003$).

Our findings are comparable to other studies. Rodríguez-Vigil et al. (4) also confirmed relationship between cardiovascular complications and gender, age, disease duration, and glycemic control in diabetic patients.

Although many studies suggest correlation between hyperlipidemia and LVDD, our analysis did not confirm this relationship in both groups ($p<0.1$ for diabetic and $p<1$ for control group) (5). We have no clear explanation why this was so, but if we take into consideration the fact that patients with good glucose regulation have a lower rate of LVDD, we can assume that it may be due to the treatment. Namely, the majority of study subjects with dyslipidemia were already on statins.

Our study supports the assumption that detection of subclinical LVDD and initiation of early treatment for potentially modifiable risk factors will delay the progression to heart failure and will improve the outcome of diabetic cardiomyopathy.

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