COMMENT ON DALMAS ET AL.

Intima-Media Thickness in Severe Obesity: Links With BMI and Metabolic Status but Not With Systemic or Adipose Tissue Inflammation. Diabetes Care 2013;36:3793–3802

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We read with great interest the recently published article by Dalmas et al. (1) in which the authors investigated the arterial intima-media thickness (IMT) and its association with systemic inflammation and adipose tissue in severely obese subjects. They concluded that IMT increased with severe obesity but was not influenced by the degree of systemic inflammation or adipose tissue macrophage accumulation. The results seem important regarding the role of adipokines, cytokines, and inflammatory mediators in the pathogenesis of nonalcoholic fatty liver disease (NAFLD). However, we think that there are some points that should be emphasized about the study.

First, it was stated that some of the participants had type 2 diabetes and were using different types of antidiabetic drugs. Both type 2 diabetes and the medications have well-known effects on inflammatory cytokines and IMT. However, there was no detailed analysis about the possible impact of these factors on the study findings. A similar situation was also true for dyslipidemia and the hypolipidemic medications (2).

Second, measurement of only fasting plasma glucose for the diagnosis of diabetes seems to be another limitation of the study, as severe obesity and metabolic syndrome are strong risk factors for diabetes and even prediabetes. Oral glucose tolerance tests would be more appropriate for evaluating glucose tolerance in subjects at high risk for abnormal glucose tolerance, as abnormal glucose tolerance has a significant effect on the levels of systemic markers of inflammation and adipokines (3).

Third, some of the subjects in the patient group as well as control group had high blood pressure as shown in Table 1 of Dalmas et al. On the other hand, there was no information about the presence of hypertension or use of antihypertensive medications. This situation is also important in terms of the parameters evaluated in the study (4).

Finally, it was stated in the article that subjects with an aspartate aminotransferase/alanine aminotransferase ratio higher than 2.5 times of the normal value were not included in the study. However, it was not mentioned whether these subjects had NAFLD or not. Obesity and type 2 diabetes are strong risk factors for the development of NAFLD. Therefore, we think that the patients with elevated liver enzymes should be investigated for the presence of NAFLD, as NAFLD is now recognized as the hepatic manifestation of metabolic syndrome with well-known effects on both IMT and adipokines. Also, we consider that this issue might be a reason for the different findings mentioned in the literature (5).

Consequently, we think that the findings of Dalmas et al. (1) may be affected by confounding factors mentioned above and additional statistical analysis taking all these factors into account should be performed. In this way, further information can be obtained about the association between obesity, inflammation, and subclinical atherosclerosis.

Duality of Interest. No potential conflicts of interest relevant to this article were reported.

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