Comment on Triglycerides-to-HDLC Ratio as a Marker of Cardiac Disease and Vascular Risk Factors in Adults

Sir,

We read with great interest, the study evaluating the triglycerides (TG)-to-high density lipoprotein cholesterol (HDL-C) ratio as a marker of cardiac disease and vascular risk factors in adults by Ain *et al.*¹ We would like to draw attention to very important points in that study.

- In that study, the standard deviations of the TG/HDLC, the quantitative insulin sensitivity check index (Quicki), and homeostasis model assessment of insulin resistance (Homa-IR) levels are too large. All the groups, which do not show homogeneous distribution for these parameters, must be given as median (range). The authors should use the Mann-Whitney U-test and Kruskal-Wallis tests instead of the one-way *Anova* test, compared to nonhomogeneous data. P values may change with accurate statistical evaluation.
- 2. In that study, patients were divided into three groups according to TG/HDL-C values. Interestingly, the body mass index (BMI) value of Group 1 is significantly higher than in the other two groups. Homa-IR value of Group 1 was lower than other Groups; whereas, the whole-body insulin sensitivity index (WBISI) value was higher than the two Groups. Abrams *et al.* reported that an 8% decrease in BMI causes an important improvement in WBISI.² A strong positive correlation between BMI with TG/HDL ratio and Homa-IR values is also known.³ If there was a positive or negative relationship between TG/HDL values and other all parameters, it should be evaluated by proper correlation analysis.¹
- 3. The skeletal muscle mass (SMM) value of Group 1 was higher than the other two Groups, and the visceral fat tissue value of Group 1 was slightly lower than the other two groups.¹ Does such a high BMI level in Group 1 depends exclusively on muscle mass? Were these patients doing bodybuilding? Or are there inconsistencies in their results? The waist circumference of the patients should be given in the results section.
- 4. Recently the atherogenic, index of plasma (AIP, log [TG/HDL-C]) value has become a more popular index

than the TG/HDL value.⁴ A previous study reported that a higher AIP level was positively and strongly related to obesity.⁵ AIP has been reported to be a novel and better marker for heart disease risk, obesity and insulin sensitivity than the TG/HDL ratio.^{4,5} The authors could evaluate the more popular AIP value in that study rather than the TG/HDL ratio.

CONFLICT OF INTEREST:

Authors declared no conflict of interest.

AUTHORS CONTRIBUTION:

EC, MCC: Literature search and writing.

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