Blood hemoglobin values are a strong predictor of serum adiponectin levels

To the Editor,

With great interest, we read the paper by Demir et al. (1) titled, "The relationship between serum adiponectin and resistin levels, insulin resistance and colorectal adenomas" that was recently published in the Turkish Journal of Gastroenterology. In contrast to previous studies (2), the authors demonstrated that serum adiponectin and resistin levels may not have a substantial predictive value for colorectal adenoma development. Moreover, they suggested that this result could be explained by genetic and ethnic differences. We would like to thank the authors for the detailed discussion of their results and for their valuable contribution to the field of colorectal cancer research. Although the discussion has covered almost all of our questions regarding the findings, there are still some methodological concerns that are required to be addressed.

From a methodological point of view, we have two major concerns: the inclusion criteria of the control group and lack of using additional statistical analysis. First, the use of patients with iron deficiency anemia as controls in a study investigating the role of serum adiponectin levels in the developmental process of colorectal cancer would undoubtedly lead to erroneous results. Gabrielsen et al. (3) demonstrated that independent from inflammation, human ferritin levels are inversely associated with serum adiponectin levels. Moreover, recent studies have verified that serum ferritin levels, which reveal tissue iron stores, are more closely associated with adiponectin than its common predictor, obesity (3,4). Lewerin et al. (5) found that serum adiponectin, but not leptin, was negatively and independently associated with blood hemoglobin levels in elderly men. In view of this data, it would be important for the authors to mention the effect of low blood hemoglobin levels on serum adiponectin levels in their anemic controls.

Second, a study evaluating the effect of different parameters on a single outcome may be better analyzed using a multiple logistic regression method. Simple multiple logistic regression is used to explore associations between one outcome variable and two or more exposure variables with the aim of isolating the relationship between the exposure and outcome variables from the effects of one or more other variables. Therefore, we consider that it would be noteworthy for the authors to evaluate the role of body mass index, gender, waist circumference, hip circumference, fasting glucose, homeostasis model assessment scores, and resistin and adiponectin levels when predicting the development of colorectal adenoma with multiple logistic regression analysis.

In conclusion, because we observe an increasing number of patients diagnosed with colorectal cancer, this study covers an important and interesting topic. Therefore, we appreciate the authors' efforts in conducting this cross-sectional trial and are delighted to come across the results discussed in the paper.

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