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Comment on "Evaluation of platelet indices and pro-inflammatory cytokines in type 2 diabetic patients with retinopathy"

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Dear Editor,

We read with great interest the recent study by Kucuk et al.[1], which investigated the relationship between platelet indices, pro-inflammatory cytokines, and the presence of retinopathy in individuals diagnosed with type 2 diabetes. This research offers valuable insights into the complex interplay between diabetes, retinopathy, and inflammatory markers. The study's meticulous analysis of platelet indices revealed a significant correlation between these indices and the severity of diabetic retinopathy. This discovery holds promise in enhancing our understanding of the underlying mechanisms contributing to retinopathy's progression. Furthermore, the inclusion of pro-inflammatory cytokines in the investigation adds points to the discussion, suggesting a potential link between inflammation and retinopathy severity. This study underscores the importance of considering platelet indices and pro-inflammatory cytokines in assessing and managing diabetic retinopathy. The findings have the potential to guide future research and therapeutic approaches aimed at mitigating the impact of this condition. Nevertheless, certain concerns among the following warrant additional clarification.

First, as described in Table 1 of Kucuk's study[1], it is evident that the type 2 diabetic patients' ages were markedly higher in comparison to the healthy controls (54.18±9.61 versus 50.04±8.93, p=0.012). This discrepancy hints at a significant age distinction between the two groups. Interestingly, a study by Cetin et al[2]. indicated a moderate negative correlation between plateletcrit (PCT) and age (r=-0.330), implying that an increase in age might correspond to a decrease in the PCT levels. In light of this finding, it is intriguing to consider the results of the study conducted by Kucuk et al., which revealed that type 2 diabetic patients had lower PTC levels compared to healthy controls (0.20±0.06 versus 0.23±0.04, p<0.001). This discrepancy in PTC levels between the two groups may not be attributed to diabetes itself, but rather potentially influenced by the higher average age among the type 2 diabetic patients. Similarly, the variations observed between type 2 diabetic patients and healthy controls in terms of mean platelet volume (MPV) and interleukin-1alpha (IL-1α) expression were not likely due to diabetes but due to the age differences between the two cohorts. Consequently, it becomes imperative to adequately adjust for age, a confounding factor, prior to delving into the data analysis.

Second, upon examining the data presented in Table 1 of the study, a particular observation arises. The average HOMA-IR (Homeostatic Model Assessment for Insulin Resistance) for type 2 diabetic patients is noted as 5.55, accompanied by a corresponding standard deviation of 6.37. This strikingly reveals that the value of the standard deviation is notably greater than the mean (6.37 compared to 5.55). Such a scenario strongly suggests that HOMA-IR data might possess a skewed distribution, thereby warranting the use of the Wilcoxon rank sum test for intergroup comparisons rather than the Student's t-test. Similarly, this can be applied to the parameter p-selectin. Among type 2 diabetic patients, the mean p-selectin value is reported as 15.78, alongside a standard deviation of 11.05. Conversely, among healthy controls, the mean p-selectin value is 13.76, accompanied by a standard deviation of 13.51. Thus, to ensure the accuracy of conclusions drawn, it is crucial to employ appropriate statistical methods that account for the potential skewed distribution of data.

AUTHORS' CONTRIBUTIONS

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