Comment on "The Clinical Importance of the Plasma Atherogenic Index, Other Lipid Indexes, and Urinary Sodium and Potassium Excretion in Patients with Stroke"

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Dear Editor,

We read with great pleasure the study evaluating "The Clinical Importance of the Plasma Atherogenic Index (PAI), other lipid indexes, and urinary sodium and potassium excretion in patients with stroke" by Koca et al. [1]. We found that they miscalculated PAI. In addition, high-density lipoprotein (HDL) values of their control groups were significantly lower. We want to mention accurate PAI measurement and low HDL levels.

The PAI value is obtained by dividing the triglyceride (TG) by the HDL and taking the logarithm of the result. When calculating PAI, TG and HDL values are taken in mmoL/L units [2]. They calculated the wrong PAI value as TG and HDL values used it in mg/dL. The cut-off values for PAI were low risk <0.11, medium risk 0.11-0.21, and high risk 0.21. Increased TG levels and decreased HDL levels enhance cardiac disease risk. Therefore, PAI has been accepted as a valuable test in determining cardiac risk in many diseases [3]. We converted their patients' mean TG and HDL values to mmol units and found the estimated PAI value to be 0.261 in stroke patients and 0.218 in control. According to their study, PAI value was high for both stroke patients and the control group [1]. Sujatha et al. [4] found PAI values significantly higher in stroke patients compared to healthy controls. Unlike the Sujatha et al' study, Koca et al. [1] had a high PAI value in the control group. Half of their control group was hypertensive patients. It is known that hypertension increases the risk of cardiovascular disease, and PAI value is high in hypertensive patients. As Koca et al. [1] compared two groups with a high risk of cardiac disease, they could not find any difference between the two groups.

The low-density lipoprotein (LDL) and TG values of their patients are similar to those of Bayram et al. study [5]. Bayram et al. [5] reported that HDL levels (mg/dL) were for 56-60 old years 48.2±16.4 in men, 52.9±15.5 in women and were for aged 61-65 old years, 45.8±14.2 in men, and 49.9±15.5 in women. The HDL values of both male and female control groups of Koca et al's [5] patients were very low. Lipid-lowering agents reduce TG and LDL, but their HDL enhancing effects are weak. It is not clear whether both groups received lipid-lowering therapy. The two groups included patients using beta-blockers, alpha-blockers, and diuretics. These drugs are known to cause dyslipidemia. Smoking, diabetes, and prediabetes lead to dyslipidemia. Blood glucose levels and smoking status of both groups are unclear. About half of the control group was using antihypertensive drugs. The association of hypertension with dyslipidemia is well-known. As a result, their stroke patients and control groups are at high cardiac risk according to PAI value. PAI values were similar in both groups because of low HDL. Further studies comparing PAI values of stroke patients and healthy controls are needed.

References

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Cite this article as: *Cure E, Cumhur Cure M. Comment on "The Clinical Importance of the Plasma Atherogenic Index, Other Lipid Indexes, and Urinary Sodium and Potassium Excretion in Patients with Stroke". Eurasian J Med 2020; 52(2): 227-8.*

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Received: January 24, 2020
Accepted: March 13, 2020
Available Online Date: June 5, 2020

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DOI 10.5152/eurasianjmed.2020.20007