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LETTER

Prognostic Value of Fibrinogen-to-Albumin Ratio in Coronary Three-Vessel Disease [Letter]

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Dear editor

We are interested in the recently published research article[1] entitled "Prognostic Value of Fibrinogen-to-Albumin Ratio in Coronary Three-Vessel Disease" in the Journal of Inflammation Research. We appreciate and congratulate the novel research work conducted by the Li X. team.

The authors aimed to assess the predictive value of the fibrinogen-to-albumin ratio (FAR) in patients with coronary three-vessel disease (TVD) and major adverse cardiac and cerebrovascular events (MACCEs). They conducted a retrospective cohort study using various methods, including receiver operating characteristic (ROC) curve analysis, multivariate Cox regression analysis, concordance index (C-index), net reclassification index (NRI), and integrated discrimination improvement (IDI) assessment. The results showed a significant positive association between FAR and MACCEs. The C-index was 0.72 ($p < 0.001$), the value of NRI was 0.3778 ($p < 0.001$), and the value of IDI was 0.0098 ($p < 0.001$) for those with FAR. Additionally, the inclusion of FAR in the traditional model significantly improved the discrimination and risk reclassification ability for all-cause mortality and MACCEs, respectively. The authors concluded that a higher level of FAR was associated with all-cause mortality and MACCE among patients with TVD, and FAR could improve the predictive performance of traditional risk factors for TVD patients.

We acknowledge the validity of the research findings, but we have identified specific concerns that need attention. Firstly, the lack of data on an appropriate therapeutic schedule for diabetes, occurrences of hypoglycemia events, and HA1c-related blood glucose control goals is a significant concern. The baseline data showed that about 40% of the participants were elderly aged ≥60, and the average fasting blood glucose is about 7.5 mmol/l, indicating relatively strict blood glucose control goals accompanied by hypoglycemic events caused by insulin or sulfonylureas. According to an expert consensus,[2] strict blood glucose control should be avoided for diabetes patients in the ICU and elderly with chronic severe cardiovascular complications, which can lead to a fatal hypoglycemic event. Despite these suggestions, overtreatment is still common in daily clinical practice among these patients, especially those who use insulin or sulfonylurea drugs. Additionally, according to guideline,[3] such patients with diabetes mellitus recruited in the current research should have started the SGLT2i and/or GLP-1RA program, which can significantly prevent/reduce MACCEs in the real-world clinical practice, putting up confounding factors for FAR. Secondly, the lack of thyroid function assessment data is another concern. Even subtle changes in circulating thyroid hormones, such as subclinical hypothyroidism/hyperthyroidism and low triiodothyronine syndrome, can affect the cardiovascular system. Thyroid hormones have receptors in myocardial and vascular endothelial tissues, and potential mechanisms linking these conditions include dyslipidemia, endothelial dysfunction, blood pressure changes, and direct effects of thyroid hormones on the myocardium.[4] Multiple studies support the association between abnormal thyroid function during an acute myocardial infarction (MI) and subsequent adverse cardiovascular outcomes. Additionally, experimental studies have demonstrated that maintaining normal thyroid hormone levels can effectively reduce the risk of arrhythmia and right heart failure in diabetic patients. Therefore, thyroid function status is also a confounding factor for FAR.

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To summarize, addressing these concerns will improve the reliability of the research findings and their clinical application prospects in routine clinical practice.

Disclosure

The authors report no conflicts of interest in this communication.

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