Diabetes, Metabolic Syndrome and Obesity

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LETTER

# Association Between Interleukin-6 Gene Polymorphism and Severity of Coronary Artery Disease in Patients with Diabetes [Letter]

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## Dear editor

I am writing to express my gratitude for the recent publication on the association between interleukin-6 (IL-6) gene polymorphism and the severity of coronary artery disease (CAD) in patients with diabetes. The study's exploration of genetic factors contributing to CAD severity in diabetic patients is both timely and significant, given the growing prevalence of diabetes and its associated cardiovascular complications.[1]

The paper clearly states its objective in the introduction, setting the stage for the reader to understand the purpose of the study. The researchers employed a robust methodology, particularly in the selection of participants and the analysis of IL-6 gene polymorphism. The researchers present the results in a well-organized manner, utilizing tables and text to aid the reader's understanding of the findings. This aids in the reader's understanding of the findings.

But the current study had a limited sample size and geographic scope, thus diminishing the generalizability of the study. Further research is needed to understand how the interleukin-6-572G/C gene polymorphism contributes to CAD and how other interleukin-6 gene polymorphisms are linked to the start and progression of CAD. Additionally, there is a need to investigate other inflammatory factors, such as interleukin-10 and CRP, and their relationship to the incidence of CAD.

However, I would be interested in recommendations for researchers and future research. There is a need to increase the sample size and expand the coverage area to enhance the representativeness of the study and any potential confounding factors considered during the analysis.

The author mentioned the limited study of mechanisms underlying how the interleukin-6-572G/C gene polymorphism contributes to CAD. The -572G/C polymorphism affects the transcriptional activity of the IL-6 gene.[2,3] Elevated IL-6 can cause chronic inflammation, endothelial dysfunction, and increased thrombosis and plaque rupture, manifesting as CAD.[4–7]

Furthermore, considering the dynamic nature of medical research, it would be valuable to discuss the potential clinical implications of the findings. How might this knowledge influence risk stratification or treatment strategies for individuals with diabetes and CAD?

The conclusion of the study makes a valuable contribution to our understanding of the complex interplay between genetics, diabetes, and cardiovascular health. I encourage further exploration in this field to elucidate the broader implications and potential applications of these findings in clinical practice. I appreciate your dedication to sharing excellent research.

## Ethical Approval

The research does not require ethical approval.

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## Disclosure

The author declares, I have no conflicts of interest in this communication.

## References

1. Yao H, Pang Y, Chen Y, et al. Association between interleukin-6 gene polymorphism and severity of coronary artery disease in patients with diabetes. *Diabetes Metab Syndr Obes*. 2023;16:3599–3608. doi:10.2147/DMSO.S427873
2. Ding HG, Yin YW, Liu SL Interleukin-6 gene− 572 G> C polymorphism and myocardial infarction risk. *Open Med (Wars)*. 2020;15 (1):376–383. doi:10.1515/med-2020-0407
3. Li YY, Zhou CW, Xu J, Qian Y, Wang XM Interleukin-6 C-572G gene polymorphism and coronary artery disease in Asian: a meta-analysis of 2511 subjects. *Int J Clin Exp Med*. 2015;8(6):8995–9003.
4. Wainstein WV, Mossmann M, Araujo GN, et al. Elevated serum interleukin-6 is predictive of coronary artery disease in intermediate risk overweight patients referred for coronary angiography. *Diabetol Metab Syndr*. 2017;9:67. doi:10.1186/s13098-017-0266-5
5. Su JH, Luo MY, Liang N, et al. Interleukin-6: a novel target for cardio-cerebrovascular diseases. *Front Pharmacol*. 2021;12:745061. doi:10.3389/fphar.2021.745061
6. Feng Y, Ye D, Wang Z, et al. The role of interleukin-6 family members in cardiovascular diseases. *Front Cardiovasc Med*. 2022;9:818890. doi:10.3389/fcvm.2022.818890
7. Song C, Liu B, Yang D, et al. Association between interleukin-6 gene− 572G> C polymorphism and coronary heart disease. *Cell Biochem Biophys*. 2015;71(1):359–365. doi:10.1007/s12013-014-0206-z



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