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NOS3 T-786C: Methodological Considerations

NOS3 T-786C: Metodolojik Hususlar

LETTER TO THE EDITOR
EDİTÖRE MEKTUP

To the Editor,

We read with great interest the article by Zakirova et al.,[1] which reports an association between the NOS3 T-786C polymorphism and renal dysfunction in patients with CHF from Uzbekistan. It is a valuable contribution to the literature on an understudied population. However, we believe that three issues merit attention.

First, the 35.8% decrease in NO concentration among patients with an eGFR < 60 mL/min/1.73 m^2 was attributed to reduced NOS3 activity, despite the absence of statistically significant genotype differences between the groups (P = 0.1–0.4). Levels of ADMA and SDMA—the former being a well-established endogenous eNOS inhibitor that is elevated in uremia—were not evaluated.[2] Controlling for these potential confounders would have strengthened the credibility of the proposed association between genotype and NO levels.

Second, 200 patients with CHF (90 with an eGFR < 60 mL/min/1.73 m^2) and 120 controls were enrolled without any reported sample size calculation. The required sample size should depend on the allele frequency and the expected effect size.[3] The absence of these considerations makes the adequacy of the sample size questionable.

Finally, throughout the manuscript, non-significant results (P = 0.1–0.4) are repeatedly described as indicative of a "trend" or a "possible role" of the C allele. The inability to reject the null hypothesis does not demonstrate an association.[4] Moreover, the 95% confidence interval for the odds ratio (0.98–1.97) includes 1, indicating that the data are also compatible with the absence of a true effect.[5]

None of these points diminishes the value of the study. Addressing them in future work would strengthen confidence in the role of the NOS3 T-786C polymorphism in cardiorenal dysfunction.

Conflict of Interest: The authors have no conflicts of interest to declare.

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