

CORRESPONDENCE

Haplotype-based case–control study of the human CYP4F2 gene and essential hypertension in Japanese subjects

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To the editor:

We read with interest and question the article by Fu *et al.*¹ investigating the association of human *CYP4F2* gene haplotypes with essential hypertension (EH) in a Japanese sample. In Table 1 of their article, the mean levels of body mass index (BMI) were found to be significantly higher in EH patients than in controls, irrespective of the gender ($P < 0.001$). The smoking habit was more prevalent in EH patients than in controls for men (66 vs. 52%, $P = 0.025$) and for all subjects (54 vs. 42%, $P = 0.013$), with no difference for women (32 vs. 23%, $P = 0.257$). However, in Table 3, the significant protective effects of BMI on EH in both genders and in all subjects raise our special concerns, as this finding is inconsistent with the growing literature indicating that obesity as indexed by BMI is associated with an increased risk of hypertension.^{2,3} If the data hold true and the analysis is correct, it might be indicated that the prevalence of underweight in this sample preponderates over that of obesity, because it is evidenced that underweight and obesity are both associated with higher all-cause mortality in men and women.^{4,5} Therefore, it would

be interesting to know more details about the BMI distribution in both genders and in all subjects.

Similarly, as shown in Table 3, smoking also exerts a significant protective effect on EH in all subjects studied (OR=0.582, $P = 0.014$), which is to some extent contrary with the results presented in Table 1, and also disagrees with the evidence of the risk-conferring role of smoking on cardiovascular disease.⁶ Indeed, we cannot rule out the possibility of strong interaction among the studied explainable variables, but it is unapt to draw such a divergent conclusion, even considering that the effect of smoking on all subjects is considerably diluted by gender. We challenge the authors to reanalyze their data and present information regarding the exact effect of smoking on hypertension in this sample.

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