

ANTECEDENT RISK FACTORS AND THEIR CONTROL IN YOUNG PATIENTS WITH A FIRST MYOCARDIAL INFARCTION

Dear Sir,

We thank Dr Afifi for his great interest in our paper. We feel that the points raised are pertinent to our study and well taken. However, we wish to make some important clarifications:

With regard to the first point, "9.5%" is a typographical error and the complete correct sentence should read "Singapore is a small but modernised multiethnic city-state with a relatively young resident population of 3.38 million and a gross domestic product of S\$178 billion. The median age is 34.9 years with 71.1% of the population under the age of 45 years."

With regard to the second point, the reader commented that non-parametric tests are "less robust" together with an earlier mention of the Mann-Whitney U test. The Mann-Whitney U test was used in our previous analysis for other variables that were not included in our current manuscript, e.g. cholesterol levels. Thus, the sentences, "The normality test was carried out for all continuous variables. A two-tail t-test was performed if the normality and equality of variance assumptions were satisfied; otherwise the Mann-Whitney U test was used." should have been deleted. Using transformations to correct the problems of non-normality are by no means a superior statistical method as transformations may create violation of other assumptions besides normality. Diagnosis of hypertension and diabetes mellitus was historical in this retrospective study. This is the same method used by Yusuf et al in the landmark INTERHEART study⁽¹⁾.

With regard to the third point, the reader suggested that we incorporate simple measures such as obesity into our study. We acknowledge the importance of obesity and the metabolic syndrome as a risk factor for coronary heart disease. Unfortunately, it was impractical to weigh many of the ill patients in the coronary care unit. To better assess obesity as a risk factor we would ideally require a case-control study, where matched controls without myocardial infarction were utilised. Such a well-conducted prospective study in Singapore is awaited with great interest.

With regard to the fourth point, the reader commented on the difference in the prevalence of hypertension and diabetes mellitus in younger compared to older patients in our cohort, and that we failed to emphasise this point. We certainly acknowledge this, but would like to state that this is a well-known fact borne out of many prior observational studies⁽²⁾, and was not the focus of this paper. We would be happy to provide the reader with the actual percentages in Fig. 2 and any other summarised data that he may be interested in. Once again, the study design, as stated in the Methods section, was retrospective and interview-based. The diagnosis was made historically as mentioned above, and it would not be easy to determine the adequacy of risk factor control in a cross-sectional study, as many risk factors such as blood pressure, glucose and lipid profile interactively change at AMI onset. It would certainly be interesting to assess the stringency of risk factor control, but that would require a more resource-intensive cohort study.

Lastly, the first and final points refer to unintended errors of syntax and the sentence "Most patients had at least one antecedent risk factor with only 96% of the younger group and 92% of the older group having at least one antecedent risk factor" should read "Most patients had at least one antecedent risk factor with 96% of the younger group and 92% of the older group having at least one antecedent risk factor".

Yours sincerely,

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REFERENCES

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2. Zimmerman FH, Cameron A, Fisher LD, Ng G. Myocardial infarction in young adults: angiographic characterization, risk factors and prognosis (Coronary Artery Surgery Study Registry). *J Am Coll Cardiol* 1995; 26:654-61.