

Comments on: Predictive Value of Having Positive Family History of Cardiovascular Disorders, Diabetes Mellitus, Dyslipidemia, and Hypertension in Non-Alcoholic Fatty Liver Disease Patients

Ali Kabir^{1,2}

¹ Department of Epidemiology, Student Research Committee, School of Public Health, Shahid Beheshti University of Medical Sciences, Tehran, Iran

² Center for Educational Research in Medical Sciences, Tehran University of Medical Sciences, Tehran, Iran

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A recent paper by Ghamar-Chehreh *et al.*, about predictive value of positive family history of some common risk factors in nonalcoholic fatty liver disease patients (1) has a useful look at this issue; but, some methodological and statistical shortcomings present that are discussed. I believe that the quality of the analysis can considerably increase with the same data without the need for any additional work except the design of the analysis. Instead of only mentioning two percentages in two different groups and *P*-value (table 3), authors could calculate odds ratio (OR) and 95% confidence interval (CI) showing both the strength of each difference/association in two groups (positive/negative family history) for each variable and significant difference/association. When 95% CI does not cover the number “one”, it means that the difference is significant. More advanced, they could also able to do logistic regression for estimating adjusted OR of the most important family histories for determining the status of different dependent variables such as HDL, TG, albumin, ALT, and so on.

By excluding participants with diabetes mellitus (DM) or FBS higher than 126, we are losing those with family history of DM more than ones without such history. Thus, it is a source of apparent selection bias in this study. It leads to underestimation of the role of positive family history of DM in different laboratory and clinical variables which have been studied in this paper. Moreover, I did not understand why only participants with active hepatitis B virus (HBV) infection; but, patients with positive serology of hepatitis C virus (HCV) were excluded from the study. What about patients with inactive HBV infection? Why they were not excluded.

Authors have mentioned that “For descriptive data, student’s t test was used”. I think they mean student’s t

test was used for quantitative variables. Some statistical indices can describe either quantitative or qualitative data. Descriptive is not synonym of quantitative.

The last but not the least important issue is the cross-sectional nature of this study. All of the assessed risk factors (family history of CVD, DM, hypertension and dyslipidemia), diseases and dependent variables like ALT, albumin, TIBC and so on are only co-morbidities. We cannot be sure about temporality of these risk factors and outcomes. For example, increased percentage of cases with high ALT level in participants with positive family history of hypertension cannot be due to such positive family history. Maybe high ALT level proceeds to positive family history in some cases. Authors did not ask patients or check the history and laboratory tests about the priority of the high ALT level or positive family histories. Thus, these variables were checked at the same time, and we cannot interpret that these family histories predict the status of laboratory tests in participants with NAFLD. Retrospective cohort studies in this field which we are aware of the base information of the subjects can be the best choice for persuading temporality as the most important part of Hill’s criteria showing the causal role of such family histories as risk factors. Such design is both powerful and cheap.

References

1. Ghamar-Chehreh ME, Khedmat H, Amini M, et al. Predictive value of having positive family history of cardiovascular disorders, diabetes mellitus, dyslipidemia, and hypertension in non-alcoholic Fatty liver disease patients. *Acta Med Iran* 2013;51(5):307-13.

Corresponding Author: A. Kabir

Department of Epidemiology, School of Public Health, Shahid Beheshti University of Medical Sciences, Tehran, Iran
Tel: +98 21 44468645, Fax: +98 21 44476796, E-mail address: aikabir@yahoo.com