Reviewer’s report

Title: Dietary Fiber Intake and Glycemic Control: Coronary Artery Calcification in Type 1 Diabetes (CACTI) Study

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Reviewer: Tasnime Akbaraly

Reviewer's report:

This article entitled "Dietary fiber intake and glycemic control: coronary Artery Calcification in Type 1 Diabetes CACTI Study" aim to examine the associations of dietary fiber with glycemic control in the CACTI cohort of type 1 diabetes cohort.

Methods: more details are needed on the CACTI cohort. Authors mentioned the ref of Snell-Bergeron et al 2009, but at least authors should give details such as: "The data presented in this report were collected as part of the baseline examination of the Coronary Artery Calcification in Type 1 Diabetes (CACTI) study. The study enrolled 1,416 individuals between 19-56 years of age, with no known history of CHD: 652 subjects with type 1 diabetes and 764 nondiabetic control subjects. Participants with type 1 diabetes had long-standing disease (mean duration 23 years, range 4-52 years), were insulin dependent within a year of diagnosis, and were diagnosed prior to age 30 or had positive antibodies or a clinical course consistent with type 1 diabetes. Dietary Intakes: Study participants who completed the baseline screening visit were asked to fill out a validated [20] self-administered food frequency questionnaire (Harvard, 1988). 1306 study participants completed the food frequency questionnaire. Per the guidelines suggested by Walter Willett [21] for excluding individuals with implausible reported energy intake, 40 participants were excluded due to reported caloric intake that was very low (< 500 calories per day if female or < 800 calories per day if male), or very high (3500 or higher if female, 4000 or higher if male), leaving 571 participants with type 1 diabetes and 696 controls in this analysis." Mentioned in the ref 14.

In addition, regarding the number of participants selected: authors mentioned in their results "1257 participants included in cross sectional analyses" however this number did not match with 696 +571=1267. Can authors can clarify this point?

Some additional informations are needed on the estimation of dietary fiber.

How the controls were matched to the cases?

What are the characteristics of participants included compared to those excluded?

Considering the design, (a case control study), could authors reformulate their objective?
Results: Table 1 provides characteristics of participants according to sex in case and in control group. Can authors justify this? Does this mean that the case control was not matched for sex? Can authors provide comparison of characteristics according to being case or control? Can authors provide some additional information related to SES of participants, health behaviors, and dietary behaviors (by deriving dietary patterns).

Table 2: Would it be possible to show these correlations in control and cases separately too?

Table 3: Authors show a cross sectional association between dietary fiber intake and HbA1c. I suggest to authors to adjust their model for dietary pattern (in which dietary fibers were excluded) or another measure of overall diet. The substantial attenuation of the associations after further adjustment for dietary compound (model 2) suggests that the association is highly confounded by other dietary components and need further examination.

Table 4 findings: please avoid "protective association" term. Authors need to revise their interpretation.

Discussion: Despite null finding author stated they "found a significant inverse association between dietary fiber and HbA1c" please see my previous comment on Table 3.

It seems that authors overstate their findings and should not use the term "protective association" in this context. Authors should also discuss more accurately the limits of the study, the choice of the design analysis and revise the global interpretation of their results.

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