Reviewer's report

Title: Associations of alcohol consumption with diabetes mellitus and hyperglycemia among middle-aged and elderly Chinese

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Reviewer: Anna Pietraszek

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Chen Liu et al have conducted a cross-sectional study of 3289 50-70 years old Chinese men and women who have reported their drinking habits regarding the weekly amount of ingested alcohol, the drinking pattern and the type of alcohol. This has been compared to their prevalence of diabetes, fasting blood sugar > 5.6 mmol/l, insulin sensitivity, pancreatic beta cell function and the concentration of some circulating inflammation factors and adipokines. The study finds an inverse association between alcohol drinking and prevalence of diabetes and “hyperglycemia” in women. In men, a moderate alcohol intake of 20.0-39.9 g/day seems to protect from both diabetes and “hyperglycemia”.

General impression:
An easily read and apparently well-conducted cross-sectional study of the association of alcohol drinking and diabetes. The study is relevant and interesting as existing data in this field concerning non-caucasians is sparse.

Major compulsory revision:
1. It would be beneficial to state whether the investigated prevalence of diabetes in the Chinese population covers both type 1 and type 2 diabetes. At least, the subject should be discussed.
2. The percentage numbers mentioned in the text, e.g. p 8 ln 22 and p 9 ln 4-6, seem not to be consistent with the numbers stated in Tabel 1. Please clarify.

Minor essential revision:
1. The definition of “hyperglycemia” is somewhat confusing. Does it comprise every subject with fasting glucose >5.6 mmol/l and therefore also the diabetic subjects? Would it not be more beneficial to use the internationally accepted terms: “diabetes” and “impaired fasting glycemia”?
2. The term “liang” should either be explained/defined or deleted.

Discretionary revision:
1. Perhaps it is worth mentioning under “Conclusion” that the association between alcohol intake and prevalence of diabetes found in men actually follows the most commonly found J-shape?
2. There are several mistakes and misspellings in the article. It would benefit from being corrected by a person fluently speaking English.
**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Needs some language corrections before being published

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests.