Reviewer’s report

Title: Alcohol as a risk factor for tuberculosis: a systematic review

Version: 1 Date: 7 May 2008

Reviewer: juergen rehm

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Review: Alcohol as a risk factor for tuberculosis – a systematic review

1. Is the question posed by the authors well defined?
Yes, with minor problems in definition of exposure (alcoholism vs. alcohol use, see below).

2. Are the methods appropriate and well described?
Yes, with very minor points (see below).

3. Are the data sound?
Yes, see minor points.

4. Does the manuscript adhere to the relevant standards for reporting and data deposition?
Yes.

5. Are the discussion and conclusions well balanced and adequately supported by the data?
Yes.

6. Are limitations of the work clearly stated?
Yes.

7. Do the authors clearly acknowledge any work upon which they are building, both published and unpublished?
Yes.

8. Do the title and abstract accurately convey what has been found?
Yes, see minor suggestion below.

9. Is the writing acceptable?
Yes.

Major Compulsory Revisions

The terminology with respect to exposure has to be clarified. What do the authors mean by “alcohol abuse”? What ICD do correspond to this term in the respective studies? Currently the term alcohol abuse is not defined in ICD, and the definition in DSM IV, which is underlying most of the today’s use, is different from the use
of the authors. Similarly, the term alcoholism is value-loaded and does not correspond to current use. If the authors want to continue using these terms, they should define it clearly. However, it is suggested that the authors change to more neutral terminology, and define the different codes and definitions underlying the research in a first paragraph in the methods.

Detailed comments and minor points, in general discretionary

Title:
Maybe change to “alcohol use” here…

Abstract:
Yet, it has not been established whether this is a causal link or one which is confounded by social factors associated with alcoholism.

The link could be causal and there still be confounding. I think it is problematic to just pose the “or” connection here. See also the results of the review.

The objective of this study was to systematically review the available evidence on the association between alcoholism and the risk of tuberculosis....

I would first avoid the term “alcoholism” and replace by the term “alcohol use disorders” or AUD, as this is the official ICD or DSM terminology, and alcoholism is more value loaded. Second, and more importantly, the authors looked at alcohol use and determined a cut-off of 40 g (see comments below), and surely not everybody drinking more than 40 g qualifies for AUD. So the objective should reflect that the paper deals with more than AUD (so as the title reflects...).

The definition of the objective is also at odds with the definition of the objective at the end of the Introduction, which states that the paper reviews the link between alcohol exposure and TB disease status...

The risk of active tuberculosis is substantially elevated in people who abuse alcohol.

Again, this a value judgment, and I doubt everybody who drinks more than 40g/day “abuses” alcohol. I would suggest to keep the language factual and neutral.

Introduction
In the 1960s, studies from Canada and Australia reported that 10% and 21% respectively of TB patients were alcoholics, which corresponded to 5 and 10 times higher prevalence of heavy drinking among TB patients than in the general population[1,2].

This would correspond to a prevalence rate of AUD of 1% to 4% maximally. Not sure, if this would be realistic controlled for sex and age.

This paper reviews analytical epidemiological studies with individual-level data on alcohol exposure and TB disease status, with the aim to determine if there is a
likely causal association between alcoholism and risk of TB disease. The paper also attempts to estimate the strength of such an association.

Again, this is at odds with the objective stated in the introduction.

Methods
Not clear, if there were restrictions by time (i.e. what was the time span for the computer-based search? If it did not have a lower limit, when was the search conducted to give the reader a clear definition of time covered) or by language (did you analyse articles of all languages?)

The third category included 6 studies that had ascertained a diagnosis of alcoholism, alcohol dependence, alcohol abuse or "heavy drinking" from medical records.

Neither alcohol dependence nor alcohol abuse has been defined with respect to g/day or level of drinking. Not clear why heavy drinking was not part of category 2, where I see a better fit of the logic.

Table 1
Moran-Mendoza, 2004
Entire study population are TB infected. RR reflect risk of progress to active disease.

Not clear, if this RR is comparable or should be pooled with the RR for incidence.

Level of interest: An article of outstanding merit and interest in its field

Quality of written English: Acceptable

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'