Reviewer's report

Title: Characteristics and risk factors for Giardia lamblia infections in Germany

Version: 1 Date: 18 June 2009

Reviewer: Kristine Mørch

Reviewer's report:

This is an interesting and clearly written report. I have a few comments:

Discretionary revisions:

1. Abstract; Methods section.
   It needs to be written more clearly that the case-control study included only autochtonous cases: I suggest to change 3. sentence to: “We conducted a case-control-study including autochtonous Giardia cases…

2. Bacground section.
   It is true that many Giardia cases are self-limiting, but reports for instance from the large Bergen outbreak in 2004, states that there was a high level of symptomatic infections in immunocompetent individuals, a high level of protracted infections, and a surprisingly high level of post-infectious fatigue and IBS. The last sentence in first paragraph may not be a correct description of the natural course of the infection. Chronic infection and asymptomatic carriage could also be discussed, since chronic infection from previous travel could lead to underreporting of travel-associated cases in this study.

3. Results.
   273 cases were included out of 326 interviewed cases, because these cases could provide a specific date of onset of symptoms. The 53 excluded cases, could potentially have had prolonged infection, possibly acquired on travel, leading to underreporting of travel related cases. This should be discussed as a limitation.
   As many as 38% of the autochtonous cases had travelled abroad in the 12 months before onset of disease, and 52% had travelled in the control group; Did they travel to endemic or non-endemic areas, was the travel destination different in the groups?
   Could there be a selection bias of the 11 out of 131 cases not included in the case-control study?
   Male sex was found to be a risk factor, drinking tap water was not a risk factor. As many as 67% of cases were male, while there was a predominance of women among controls. After an outbreak in Bergen in 2004, a predominance of infection in women was reported, and amount of water consumed was a risk factor, possibly because young women exercise and drink much water as a
cultural phenomenon to stay healthy. In this report tap water daily was reported, but not amount of water. This could be discussed. Was effect modification by gender on the association between tap water drinking and giardiasis tested in the statistical analyses?

4. Tables
It would have been of interest to include p-values in all three tables. All abbreviations should be written out in footnotes.

Minor essential revisions:
Typographical error: Page 11, second last sentence, two dots at the end of sentence.
Page 13, 9. sentence: Products?

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:
I declare that I have no competing interests