Author's response to reviews

Title: Risk factors for latent tuberculosis infection in close contacts of active tuberculosis patients in South Korea: a prospective cohort study

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Author's response to reviews: see over
Major Compulsory Revisions

1. The inclusion criteria for study entry of individuals with a previous history of pulmonary TB has been only partially explained: this is a key-point in order to assess both the prevalence of LTBI among the study population and the risk-factors associated with this condition.
   Response) We enrolled close contacts regardless of a previous history of TB. Even if pulmonary TB was diagnosed and treated previously, contact investigation is necessary in close contact of patients with active pulmonary TB. Previous history of TB was identified by self-reported questionnaire. The impact of previous history of pulmonary TB on the latent tuberculosis infection (LTBI) had not been well studied. In South Korea, where the incidence of TB is intermediate, considerable number of people has a previous history of pulmonary TB (approximately 7% of study population in this study). We aimed to assess the association between previous history of pulmonary TB and LTBI in close contact of active pulmonary TB patients.

2. No clear criteria were adopted for using TST and/or IGRA tests to obtain a LTBI diagnosis: this remains a limitation of the paper.
   Response) We agree with you. In Korean guidelines, both single screening strategy using TST or IGRA and dual screening strategy using TST and subsequent IGRA were recommended. Therefore, we gave an option of choosing between TST and/or QFT-G to participants according to the Korean guidelines. We think that this is a limitation of the current study.

3. Authors state that all the participants of the present survey were enrolled in another international multicenter study: unfortunately no information is available concerning the objectives, the criteria and the methods used in the original protocol.
   Response) The primary objective of the study was added in the method section of the manuscript as your recommendation. More informations regarding the original multicenter study were registered on the website, ClinicalTrial.gov(NCT00931736). The protocol of the original study was provided as a supplementary appendix.

Minor Compulsory Revisions

1. Page 5 lines 102 – 103 (comments to the first manuscript submitted): further details need to be provided concerning the choice of 5 mm as the cut-off for TST positivity in a population of immunocompetent subjects. Unfortunately, no information is available concerning the criteria and methods used in the original protocol of the multicenter study.
   Response) The inclusion criteria of close contact is a close contact: >4 hours contact per week, for > 1 week with person with active pulmonary TB. (TST >5 mm or QFT +) The protocol of the original study was provided as a supplementary appendix.

2. Page 7 line 164 (comments to the first manuscript submitted): these results are not convincing; please, discuss them in more details in the text.
   Discussion
   Response) We totally agree with you. Detailed contents were presented in the discussion section, page 10 line 222-231 (in the first manuscript submitted). High
BCG vaccination rate in South Korea lowered the agreement of two tests and statistical power.

3. Page 7-8 lines 170 – 172 (comments to the first manuscript submitted): the inclusion criteria for study entry of individuals with a previous history of pulmonary TB has been only partially explained: this is a key-point in order to assess both the prevalence of LTBI among the study population and the risk-factors associated with this condition.  
Response) Thank you for your comment. Please refer to your 1st major comment and our response. Both the inclusion and exclusion criteria of the study design did not include a previous history of pulmonary TB.