Reviewer's report

Title: T-cell-based diagnosis of tuberculosis infection in children in Lithuania: a country of high incidence despite a high coverage with bacille Calmette-Guerin vaccination

Version: 4 Date: 9 July 2009

Reviewer: Tae Sun Shim

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Discretionary Revisions

The prevalence of positive TST in the studied children at a “high risk for TB” and in the children at a “low risk for TB” was significantly higher than the prevalence of positive T SPOT TB results was in the same groups. According to the results of this study, the prevalence of positive TST is high, even in the “low risk for TB” group. TST may be false-positive in many cases of studied children, since all the studied children had a BCG vaccination in early childhood (the coverage of BCG vaccination in our country is high). Previous studies have also shown that the TST does not accurately reflect the risk of latent TB infection in a setting with extensive BCG coverage.

=> Above description is definitely correct. I totally agree on that opinion.

My concern is that if T-SPOT.TB is a good test for diagnosing TB infection, the positive T-SPOT.TB rates should be higher in “high-risk group” than that in low-risk group. For example, the positive IGRA rate was 4%, 10%, 44%, and 81% in low-risk, casual contact, close contact, and active TB patients, respectively, showing definite gradient between groups (Kang et al., JAMA 2005;293: 2756-61). However, in this study, the positive IGRA result was 17.8% and 9.5% in high-risk and low-risk groups, respectively, showing minimal difference or no statistically significant difference. So, even though the authors can keep the conclusion as is, I would recommend that above findings be addressed in the discussion section.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

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