Reviewer's report

Title: Use of the Italian version of the Pediatric Asthma Quality of Life Questionnaire in the daily practice: results of a prospective study.

Version: 1 Date: 6 December 2008

Reviewer: Isabelle PIN

Reviewer's report:

The authors proposed a study aiming at evaluating the interest of the pediatric asthma quality of life questionnaire (PAQLQ) in their asthma clinic in Bologna. The study is based on the evaluation of 52 children, who answered this specific questionnaire twice at the same time of a complete evaluation including assessment of asthma severity and asthma control as well as measurement of respiratory function. The design of the study seems adequate. The Italian version of the PAQLQ has been developed as recommended. However, this manuscript suffers from major drawbacks in the analysis strategy.

Major comments

First of all, the presentation of the results of the PAQLQ should be given for the total score and then by domains but not by questions. (Tables 3 are useless). PAQLQ although not perfectly normally distributed is usually analysed as a continuous variable.

If one wants to examine the interest of such an evaluation of HRQL, the analysis should be separate in 2 steps:

- First of all to understand the construct validity of the PAQLQ by studying the relationships between the questionnaire, its different domains (and not each question) and different items such as asthma severity, asthma control, seasonal or perennial asthma and respiratory function. This should be based on correlation analysis. Because the authors have data twice for each child included in the study, the analysis could be based on the entire data set, but with specific analysis taking into account the dependence between observations from the same patients, for example by regression mixed models, with generalized estimation equations. Therefore, results from both tables 4 would be shown on only one analysis.

- Secondly, to study the responsiveness of the PAQLQ between the 2 evaluations. This should be done by comparing the evolution of the PAQLQ scores and changes in asthma severity, asthma control and respiratory function on paired data. This analysis has not been performed formally by the authors. In this respect, it would be useful to know in details what medications changes have been prescribed between the 2 visits.

Regarding the clinical outcomes used to compare the PAQLQ, the authors assessed asthma severity according to the 2006 GINA guidelines. These
recommendations should be applied to children who do not use long term treatment. However it seems that this classification has been used for all children even those already treated.

Page 9, second paragraph: “HRQL impoves when pulmonary function is better” should be modified because this relates to a cross sectional analysis: HRQL is better when the respiratory function is higher. I do not agree with the conclusion of the authors regarding the different relationships between FEV1 and PAQLQ scores in the 2 surveys: this has probably nothing to do with better completion of the questionnaire.

The results of the correlations between PAQLQ scores and asthma control are not well shown in the results section: PAQLQ scores of the controlled and not controlled population should be given.

**Level of interest:** An article of limited interest

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

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

'I declare that I have no competing interests'