

## Response to the letter: non-specific diagnosis of bacterial pneumonia in children

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Dear Editor,

We are very grateful to Prof. Korppi for his valuable and stimulating comments on our retrospective procalcitonin (PCT) study in hospitalized children with acute respiratory tract infection (ARI). We fully agree with him that antibiotic use for ARI in children should be lessened as much as possible. We also agree that, in the probable future, bedside tests for PCT, CRP, and WBC might be available and allow differentiating between children who have to be treated with antibiotics and those who should not. It was the intention of our study to add to the existing body of evidence some preliminary data on PCT in children with ARI, clearly bearing in mind the limitations of a retrospective analysis. We also fully agree with Prof. Korppi that the 26 patients in our study with a PCT<0.1 ng/ml who were excluded from our analysis for a couple of different reasons would have been rather important for a most comprehensive conclusion. We do, however, not agree that these patients would have been the critical ones to draw any conclusion. In our study, we were interested in the first place to identify patients in whom antibiotics could be withheld with a great margin of

safety and who therefore would be uncritical in a future intervention trial waiving antibiotic therapy. Furthermore, we believe that—even if many patients in our retrospective analysis were excluded—many health authorities and hospital leaders would be even quite satisfied when the antibiotic use could be reduced by one third (12/38).

We agree, as mentioned above, that for a comprehensive conclusion it would have been desirable not to exclude any patient in order to meet most fairly the so-called field conditions. However, would this have been really reasonable? It is worthwhile to look in detail why these 26 patients were excluded. Some of these patients had a disease that was later on diagnosed as urinary tract infection. Others were pretreated with antibiotics. Others again had a severe underlying disease and would therefore not be the patients to include in a study on uncomplicated respiratory tract infection. Therefore, we agree that exclusion of these patients hampers a study like this, but in terms of preparing a prospective study protocol on uncomplicated ARI we probably would continue to exclude the patients whom we decided not to include in this retrospective analysis.

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