Reviewer's report

Title: Clinical and epidemiological data of pertussis in fully immunized children in Lithuania

Version: 2 Date: 3 November 2004

Reviewer: Alberto E. Tozzi

Reviewer's report:

General
The article gives some information on the epidemiology of pertussis in Lithuania and describes a case series of fully vaccinated and laboratory confirmed cases. The number of cases is limited and the cases may be selected among the most severe.

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

I would say that it is not appropriate to state that the paper describes the epidemiology of immunized pertussis cases. I would rather say that this study gives information on the clinical presentation of cases. It would be useful to briefly describe the epidemiology of pertussis in Lithuania.

In the introduction it is stated that data on the clinical course of pertussis in fully immunized children are controversial. It would be good to describe in detail which kind of inconsistencies have been found.

Methods. It should be stated if the 70 cases included in this study were consecutive or were selected for other reasons (lab not available in their residence, etc.), in order to give an idea on how cases were selected.

How clinical information were collected?

Case definition of pertussis for confirmed cases is unusual. Is that the case definition used for surveillance or is it an arbitrary choice?

The use of one-point serology for laboratory confirmation should be discussed. In particular it seems that hospitalization occurred long time after the cough had begun. This may have improved the capacity of serology in detecting cases.

I agree that since most children received an antibiotic treatment the chance of finding a culture positive may have been low. However it is a pity that there was no attempt in using this diagnostic method. This may have corroborated the results and made this case series more comparable to others.

I would expect that more severe cases were selected in this study. This possibility should be properly discussed.

Is there any contact of cases with a laboratory confirmed pertussis? The epidemiological link with a confirmed case in a child with cough could have contributed to recruit more cases.

The statement that protection from acellular pertussis vaccines lasts 4-6 years is not supported by the references.
It should be discussed that antibiotics are often only markers of severity.

Since culture has not been performed no information is available on B. parapertussis infection. This issue should also be addressed.

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

In the abstract and in the discussion the term "typical pertussis" is often used. I would list the symptoms instead.

Abstract, first sentence: the time frame in which this study has been performed should be stated.

Abstract, third sentence: state if the 70 patients were consecutive.

Introduction. The comments on resurgence of pertussis mix data from the US and from the Netherlands. The latter has a peculiar history which is quoted in the discussion and that may relate with the genetic variability of circulating strains. It may be appropriate to take this point in the discussion only.

Some data on vaccination coverage and on pertussis incidence are presented in the introduction and in the discussion. These two pieces of information may be put together at the end of the introduction or as a first paragraph of the results section. It would be interesting to describe vaccination coverage and incidence by age group in the last years.

Table 1 should mention the number of patients included in the analysis.

Discretionary Revisions (which the author can choose to ignore)

In the introduction it is stated that the proportion of vaccinated cases of pertussis had been increasing over time. This effect is expected since, at the extreme level of coverage, 100%, all cases would be among vaccinated people. A comment on this would make a stronger point on the fact that we will be seeing more and more vaccinated cases.

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

Level of interest: An article of limited interest

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

Statistical review: No