Reviewer's report

Title: Subacute Sclerosing Panencephalitis: Results of the Canadian Paediatric Surveillance Program and review of the literature.

Version: 5 Date: 28 September 2005

Reviewer: Benedikt Weissbrich

Reviewer's report:

General

The authors have responded adequately to most issues raised by this reviewer.

Major Compulsory Revisions

1. Introduction, line 6: The issue of SSPE and measles virus vaccine is important, because misconceptions about this question may lead to unjustified scepticism against measles vaccination. Changing “only exposure” in “only known exposure” in the revised manuscript and citing a reference from 1982 is not sufficient to address this issue. As pointed out in the comments on the previous version, reports of an association between SSPE and measles vaccination based on the absence of a history of measles disease are unreliable. Modern techniques of molecular epidemiology allow to distinguish wild-type and vaccine virus with certainty when brain material is available. Vaccine virus sequences have not been detected in a single SSPE case, yet. These aspects should be mentioned, when the issue of measles vaccine and SSPE is addressed.

2. Discussion, page 12, last sentence: As pointed out before, the statement “whose infection pathogenesis was as a result of the standard exposures and vaccination programs …” is inappropriate. Measles infections in the first year of life may remain undetected, because the course of measles may be attenuated or atypical because of the presence of maternal antibodies. It is therefore impossible to make the definitive statement for case 2 that the “infection pathogenesis” is vaccine associated. This is merely speculation, which should be omitted or indicated as such. Discussion of this issue should only be done in the context of recent data derived from molecular epidemiology of measles virus in SSPE brain tissue.

Minor Essential Revisions

3. Abstract, Results: The last two sentences may convey the wrong impression that the children treated with isoprinosine and IFN remained alive. This should be clarified.

4. Table 2: Relating the number of SSPE cases to the number of the relevant measles cases allows a better assessment of the risk of developing SSPE than incidence data referring to the total pediatric population. The authors have tried to address this issue by providing the immunization status of the population in the table. As a review of the literature, the reader would benefit from stating the SSPE risk with respect to the number of measles cases for those references, where this information is provided. For reference [45], e. g., the risk estimate of SSPE following measles of 1 per 25000 in general and of 1 in 5500 for measles in the first year of life should be included in the table.
5. Table 4, page 35, [28] Anlar: The comments on this study made in the discussion (little data on control group, unclear why the controls did not receive IFN; page 17) should be included in the comment row of the table as well.

Discretionary Revisions

6. Both IFN and INF are used as abbreviations for interferon in the paper. One of these abbreviations should be used throughout the whole paper.

7. Discussion, page 13, line 14: “periodic” instead of “period”

8. Discussion, page 14, line 14: “…were noted in only…”

9. Discussion, page 18, line 19: include reference [50]

10. Discussion, page 18, last line: “amantadine” instead “amatidine”

11. Table 4, page 33, last line: “clinical benefit seen…”

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

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: No

Declaration of competing interests:

I declare that I have no competing interests.