Reviewer's report

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

Version: 3 Date: 27 June 2005

Reviewer: Brenda Banwell

Reviewer's report:

General

Campbell et al report on 4 children with SSPE identified through the CPSP program. Incidence data on Canadian cases of SSPE is important, and not previously available.

General Comments:

1. The manuscript is far too long, and contains many redundancies.
2. The manuscript is not an invited Editorial, and thus the authors should avoid interspersing personal views into the manuscript.
3. Several Tables (especially Table 4) are already discussed at length in the manuscript. Data presented in Tables should not be repeated in the text.

-------------------------------------------------------------------------------------------------------------------------------------

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

Abstract

1. The conclusion should be re-written. The authors have not demonstrated that Canadian pediatricians “will” encounter SSPE. With only 4 cases identified, it is in fact highly unlikely that all but a few pediatricians will see a patient with SSPE in Canada.

Introduction

1. The authors state in some cases of SSPE the MMR vaccine is the only exposure- this might be more accurately stated as the “only known exposure”, as parents might not always recognize mild measles infection.
2. The last sentence of paragraph one might be better stated as “The SSPE disease course is characterized by progressive deterioration leading to death within 10 years of onset. Decline may be punctuated by periods of clinical plateau of variable duration”

Methods

1. The authors should more clearly define “participants” as “pediatric health care providers”.

Case Reports:

1. Use medical terminology whenever possible- avoid jargon phrases such as “brief sleeping episodes” “obvious” ataxia,
2. No data on autopsies of the 2 children who died is presented. If autopsy studies were not performed, this should still be mentioned.
3. The authors should state whether the immunization record for Case 2 was actually reviewed, and if the child’s pediatrician was contacted to verify immunization. The fact that the mother was “clear” on all immunizations is not sufficient evidence, as most parents do not really remember immunizations. Given the importance of vaccine-related illness, a thorough investigation is advised.
4. Provide actual data for laboratory measures. Do not use “within normal”. In some Cases, all investigations are listed, in others only a limited list of investigations is described-please be consistent.
5. What is the relevance of Case 4 receiving vaccination (if this can be confirmed) upon entry to Canada, if he had already experienced clinical measles infection at age 1 year? Does vaccination after primary infection modify the likelihood of SSPE?
6. Provide details of the brain biopsy in Case 4- “findings did not clearly delineate SSPE” is far too vague.
7. How was the intraventricular interferon alpha administered to Case 4?

Discussion

1. In paragraph 2, the authors state that 3 of the children acquired primary measles infection “in areas of the world with endemic measles”. One of these children contracted measles infection in Canada (Case 3)- not in an endemic region.
2. Please report incidence data in a standardized manner (ie: per 100,000). This will be much easier for the reader. In addition, either include this data in the text or use Table 2- not both.
3. The entire section on pathogenesis of SSPE reads poorly. A more concise summary, with less conjecture would be preferable. The attempt to link reduced viral exocytosis to increased chronic replication is difficult to understand.
4. The clinical features section should use medical terminology and provide a more accurate detailed description of seizure semiology.
5. Clarification of childhood measles infection is not limited by “cultural or language issues”- translation services should be made available.
6. What is 66% neurological disability?
7. The authors should avoid non-medical adjectives such as “surprisingly normal EEG background”.
8. The paragraph comparing the NDI and BAE is very hard to read.
9. In the treatment paragraphs, it is stated that “In the same manner, interferon…” Interferon does not act in the same manner as Isoprinosine, thus “in the same manner” should be removed.

10. Personal impressions, particularly in the section on therapeutic options should be avoided. Summarize the available literature, comment on the quality of the trials and their limitations, but avoid un-referenced statements such as “Interferon alpha has more controlled data at this point”, or “despite widespread acceptance of … standard of care”, or “less than optimal results”, “with mixed success in case series”, or “given profound deterioration, it remains difficult to limit therapy to this medication alone” (why is it difficult- given that the other therapies do not work, Omaya reservoirs are not benign, and funding for expensive, non-helpful therapies poses great hardship on families and health care systems?). It is indeed painful to watch a child undergo neurodegenerative illness. Perhaps the authors could comment, briefly, on the end of life care, respite services, and palliative care offered to children with SSPE and their families.

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

Discretionary Revisions (which the author can choose to ignore)
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: Needs some language corrections before being published

Statistical review: No

Declaration of competing interests:

'I declare that I have no competing interests'