Reviewer’s report

Title: Metabolic Encephalopathy secondary to Diabetic Ketoacidosis: A Case Report

Version: 0 Date: 06 Apr 2019

Reviewer: Takao Ando

Reviewer’s report:

Tomkins et al. reported a rare case of metabolic encephalopathy developed in a patient with type 1 diabetes and multiple sclerosis. The neurological symptoms did not improve after intensive control of DKA and there were no apparent causes of his encephalopathy after extensive screening. Thus, the patient underwent brain biopsy and the histological finding suggested metabolic encephalopathy. The manuscript was too redundant and thus should be described concisely. There are several concerns from this reviewer.

1. There was no detailed description how DKA of the patient was treated. This should be included.

2. Considering the poor adherence to medical service and treatment to T1DM and multiple sclerosis, his complication of depression, and his habit of chronic excessive alcohol intake and occasional cannabis smoking, it is not difficult to imagine the patient with malnutrition could develop several kinds of encephalopathy. It would not be safe to consider the cause of his encephalopathy was solely diabetic.

3. There is a concern from this reviewer about the diagnosis of type 1 diabetes in the patient since his HbA1c was atypically low when developed DKA. Thus, authors should provide the data supporting the diagnosis of T1DM, such as endogenous insulin secretion and autoantibodies to the islet measured when he first developed diabetes and when he developed metabolic encephalopathy. Similarly, other causes of ketoacidosis should also be considered since his clinical background is complicated.

4. Authors mentioned the patient was able to survive for 2 years without insulin treatment. This worries this reviewer about his diagnosis of T1DM again. Is there any way to get insulin without being seen by clinicians in your country?

5. The long description of the clinical course after developing encephalopathy was too descriptive and does not contain significant information. This part should be shortened. Discussion also has the same problem.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes
Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

No

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

No

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

Not relevant to this manuscript

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable

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