Reviewer's report

Title: Low carbohydrate diet-associated ketoacidosis: a second case report

Version: 3 Date: 9 October 2007

Reviewer: Klaus Lessnau

I am familiar with the literature and believe that this case meets one of the 7 criteria for evaluation in the journal: Presentations, diagnoses and/or management of new and emerging diseases

Has the case been reported coherently?: Yes

Is the case report authentic?: Yes

Is this case worth reporting?: Yes

Is the case report persuasive?: Yes

Does the case report have explanatory value?: Yes

Does the case report have diagnostic value?: Yes

Will the case report make a difference to clinical practice?: Yes

Comments to authors:

General

I believe that this report is important and warrants publication after some adjustments.

Revisions necessary for publication

This would be at least the third report of low carbohydrate intake associated metabolic acidosis. One similar case was concisely described in my own article in the Lancet in 2006. I wonder if the authors have performed an extensive literature review. I also wonder whether there may be even more than three cases in the literature. An extended literature research may be useful. The discussion part could mention the search engines that were used to locate similar cases.

The abstract should state the bicarbonate level of the patient on admission and his weight, possibly expressed as body mass index. The case study should state if the patient used as guideline the “Atkins diet” or the “South Beach diet”. This could also be stated in the abstract.
“Exam” should be stated as “examination”.

The study should mentioned examples of the patient’s intake such as sausages, meat, cheese and beef. It should mention whether the patient did take or not take supplemental medications such as vitamins, over the counter medications or alternative medications. The amount of carbohydrate intake should be estimated, e.g. “two small cups of salad per day”.

The discussion should discuss why his alcohol use would not explain the symptoms. The case report should mention if the patient consumes alcohol on a regular schedule or only during the night prior to admission. I wonder if amylase and lipase levels were elevated.

The authors may want to discuss whether measuring blood levels, such as serum osmolal gap, L-lactate and D-lactate, serum acetone, beta hydroxybutyrate, free fatty acids and salicylate, are useful in suspected patients. This also applies to measurements of insulin, C-peptide and glucagon. What else should be done if another patient on a low carbohydrate diet is admitted to the hospital with metabolic acidosis?


**What next?:** Revise and resubmit

**Quality of written English:** Acceptable