Author’s response to reviews

Title: Accidental ketosis-induced polyuria in a toddler: A case report

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Version: 1 Date: 03 Oct 2019

Author's response to reviews:

To the editor:

Thank you to the reviewers for their thorough review and consideration of our manuscript. Please see our responses and corrections below.

Reviewer reports:

Ayse Balat (Reviewer 1):
The authors presented an interesting pediatric case having polyuria because of ketosis. It may be beneficial for pediatricians, considering the increasing number of parents searching for healthy diets without taking into account the unwanted effect(s) of such diets on children. However, the manuscript needs some corrections;

1. It would be appropriate to add renal function tests, blood gases, serum and urine electrolyte levels of the patient.
   • Thank you for this comment. We agree that these tests can add additional supplemental information to the case. With this patient a blood draw was not performed aside from the finger stick blood glucose measurement. We do not have the ability to perform finger stick blood gases or renal function tests with a finger stick sample. With the history obtained and the accompanying urinalysis and finger stick glucose results, we felt confident that our working diagnosis was correct and thus initiated the treatment plan of increasing carbohydrate intake which resolved the issue.
   The following sentence has been edited in the manuscript to reflect this (lines 196-199):
   “In addition to a thorough history and physical, the diagnosis of polyuria typically requires a 24hr urine void collection to confirm the presence of excessive urine output. Subsequent laboratory analysis including urine osmolality, urine electrolytes, renal function tests, blood gas, and serum and urine glucose measurement can help make a diagnosis.”

2. Although the abbreviations of PDHD and MCT are clearly written in the discussion, it would be better to do at the first use of them in introduction.
• The term “pyruvate dehydrogenase deficiency” has been added to line 69 with the first use of the abbreviation. The term “medium-chain triglyceride” has been added to line 113-114 with the first use of the abbreviation.

3. Since the sentences between lines 105-111 contain comments, they should be included in the discussion, not in the case presentation.

• The sentences between lines 105-111 have been moved to the discussion section and are now lines 112-118.

4. The definition of polyuria on line 152 should be corrected (> 2000 ml / m2/ 24 h, instead of > 2 L / mL / m2 / 24 h)

• This has been corrected (now line 154)

5. The sentence in lines 165-166 and the sentence in lines 173-175 are exactly the same. It would be better to avoid repetitions in the discussion.

• The following lines of repetition from lines 173-175 have been removed.

“Insulin exerts an anabolic effect on metabolism by promoting the uptake of glucose by cells, glycogen synthesis and lipogenesis while simultaneously inhibiting glycogenolysis and lipolysis.”

6. In some of the references, the names of journals are abbreviated as used in Pubmed, but some of them are not. They should be corrected according to the rule of the BMC Pediatrics.

• Please provide additional information about this comment. On the BMC Pediatrics website under Case Report Submission Guideline Criteria, the examples for references show both the use of full journal names as well as abbreviated journal names which seem to reflect the accepted use of the journals when referenced. Please let us know if this should be changed to reflect only full journal names.

https://bmcpediatr.biomedcentral.com/submission-guidelines/preparing-your-manuscript/case-report

• Examples shown on the website include:

Article within a journal

Article within a journal (no page numbers)

7. Table 1; Sjögren is miswritten.

• Table 1 has been corrected to reflect the error.

Hany Binti Mohd Ariffin, MD, PhD (Reviewer 2): The case report is interesting and a pertinent reminder to general pediatricians regarding the importance of taking a good dietary history. However, there is also an element of 'coincidence' in the resolution of the child's polyuria with introduction of more carbohydrates in his diet. The mother's estimates of his urine volume pre- and post-dietary modification is subjective and the authors do not actually state the volume of urine reduction. It would have been more accurate if the mother was asked to weigh the diapers rather than by simple reporting whether symptoms had resolved.
Thank you for this comment. We agree that actual diaper weights would have been useful to measure the output change in volume. In this case, the parent does not own a scale that measures to the ounce or half-ounce which would be needed for such measures. We did however complete a follow up urine dipstick to confirm resolution of the ketonuria and proteinuria (line 105)

Please state if a renal function test with electrolytes (including serum calcium) was performed. If yes, these values would be of interest to the reader.

We agree that these tests can add additional supplemental information to the case, with this patient, a blood draw was not performed aside from the finger stick blood glucose measurement. We do not have the ability to perform finger stick blood gases or renal function tests with a finger stick sample. With the history obtained and the accompanying urinalysis and finger stick glucose results, we felt confident that our working diagnosis was correct and thus initiated the treatment plan of increasing carbohydrate intake which resolved the issue.

The following sentence has been edited in the manuscript to reflect this (lines 196-199):
“In addition to a thorough history and physical, the diagnosis of polyuria typically requires a 24hr urine void collection to confirm the presence of excessive urine output. Subsequent laboratory analysis including urine osmolality, urine electrolytes, renal function tests, blood gas, and serum and urine glucose measurement can help make a diagnosis.”

There is a typographical error on Line 152 regarding the definition of polyuria. Also, the discussion between Lines 165 -176 is repetitive and should be made more succinct.

The polyuria typographical error has been corrected (now line 154).

The discussion between lines 173-175 that was repetitive has been removed to make the discussion more succinct.

The repetitive lines read as:
“Insulin exerts an anabolic effect on metabolism by promoting the uptake of glucose by cells, glycogen synthesis and lipogenesis while simultaneously inhibiting glycogenolysis and lipolysis.”