Reviewer’s report

Title: Burn wounds after electrical injury in a bathtub, a case report

Version: 0 Date: 18 Jul 2019

Reviewer: Diogo Casal

Reviewer's report:

1. Do you believe the case report is authentic?

Yes

2. Do you have any ethical concerns? Please consider if local Institutional Review Board approval or ethical approval was obtained (if appropriate) and if the patient (or their parent or guardian in the case of children under 18) gave written, informed consent to publish this case and any accompanying images. A statement to this effect should appear in the manuscript.

Comments:

I have no ethical concerns.

3. Does the Introduction explain the relevance of the case to the medical literature?

Yes

4. Does the article report the following information?

Information missing:

Ethnicity

c. Important dates and times in this case (if appropriate, organized as a timeline via a figure or table); if specific dates could lead to patient identification, consider including time relevant to initial presentation, i.e. initial presentation at T = 0, follow up at T = 1 month.

Yes.
d. Diagnostic assessments, including:
- Diagnostic methods
- Challenges (e.g., financial, language/cultural)
- Reasoning and prognostic characteristics (e.g., staging), where applicable
  Not applicable

e. Types and mechanism of intervention
  Yes

f. A summary of the clinical course of all follow-up visits
  Yes

5. Is the interpretation (discussion and conclusion) well balanced and supported by the case presented?
  Comments:
  Yes

6. Is the anonymity of the patient protected? Please consider any identifying information in images such as facial features or nametags, whether the patient is named etc. If not, please detail below.
  Yes

7. Is the Abstract representative of the case presented?
  Comments:
  Yes
8. Does the case represent a useful contribution to the medical literature?

Comments:

Yes

9. Additional comments for the author(s)?

The authors describe the clinical case of thirteen-year-old patient who sustained electrical burns while using a smartphone plugged into the electrical grid, while taking a bath.

Overall, I believe this subject is very pertinent and seldom portrayed in the literature. Therefore, I believe this paper should be published after some revisions.

Major concerns:

The authors state that "The day after admission the CK level slightly elevated to 1400 U/l. The urine was tested for myoglobinuria, but showed no signs of rhabdomyolysis."

I believe the authors should note the myoglobin half life is short and may not be present in late forms of rhabdomyolysis.

It is well established that myoglobin is normally bound to plasma globulins, and is maintained at a low serum level of 0 to 0.003mg/dL. Once circulating myoglobin levels have exceeded 0.5 to 1.5mg/dL it overwhelms its protein binding capacity, tubule endocytosis rate and metabolism rate, and is rapidly excreted in the urine. Hence, myoglobolinuria is pathognomonic to rhabdomyolysis, but is not necessarily visible. Elevated serum myoglobin and myoglobolinuria are reliable indicators for rhabdomyolysis, but present some limitations. Serum myoglobin levels rise and drop much faster than CK levels (in 1 to 6 hours), thus have a low negative predictive value and may not be used as a ruling out test. 1

Therefore, I believe that not detecting myoglobinuria the day after the accident does not allow to rule out mild rhabdomyolysis, which is the most likely cause of elevated CK level in this context.2

Also, from my standpoint, readers would probably want to know what were the lactate dehydrogenase, transaminases, potassium and phosphorus blood levels.
Finally, I believe readers would be probably interested in knowing if the authors performed any therapeutic maneuvers to decrease the potential kidney injury related to an eventual rhabdomyolysis.

Minor issues

On page 5, there was a typo in the following sentence:

"The urine was tested for 84 myoglobinuria, but showed no sig4,5ns of rhabdomyolysis."

On page 7, I would suggest revising the following sentence:

"This casus learns us that the use of electronic devices in bathrooms should be avoided at all times when water is used."

Bibliographic references


Level of interest
Please indicate how interesting you found the manuscript:

An article of importance in its field

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

Needs some language corrections before being published

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No