Author's response to reviews

Title: Spinal cord injury secondary to high-voltage electrocution: a case report.

Authors:

Harpreet K. Johl (harpreetjohl@gmail.com)
Adel Olshansky (adel.olshansky@gmail.com)
Said R. Beydoun (sbeydoun@usc.edu)
Richard A. Rison (rison@usc.edu)

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Author's response to reviews: see over
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Dear JMCR Editorial Team,

We thank both reviewers for their time and valuable comments in reviewing our manuscript. Please accept our apologies for not having provided the revisions sooner. Please see below for a point-by-point rebuttal. All changes have been made in red high-light within our revised manuscript.

REVIEWER 1:

“I had a chance to review the manuscript.
I have several suggestions to improve the manuscript.
All the figures should be laid out on one page for easy comparison. Authors suggests figure B (DWI) and figure C (ADC) are confirmatory of infarction in this patient with predominant paraparesis. Several problems with this.
1. To my eyes levels of abnormality on DWI and ADC do not demonstrate same level of cervical cord involvement. ADC has signal changes on lower cervical spine than DWI.
2. DWI signal abnormality seems to be located on the dorsal aspect of the cord, which does not correlate well with predominant paraparesis.
Patient also had brain MRI abnormality consistent with ischemic stroke, although the signals resolved on followup scan. Bilaterality of the lesions involving the corticospinal tracts suggest this may have been responsible for his clinical quadraparesis (although legs were more involved). On my copy of the figure I am not convinced of persistent “abnormal signal posteriorly … to the C6 level” two months later.
Discussion should be significantly shortened and more concise. For example authors have divided classification of electrical injury over 3 separate paragraphs.”
Given the images submitted we agree that there is some room for interpretation regarding slightly different radiographic levels of cervical cord involvement with respect to the DWI and ADC sequences. We also concede that the DWI signal abnormality may extend into the dorsal aspect of the cord which does not correlate well with the patient’s predominant quadriplegia. Electrocution often produces collateral tissue damage, and we reviewed the images with our staff neuroradiologist along with the patient’s clinical findings. We now mention this within our revised manuscript to alert the reader’s attention to Reviewer 1’s astute comments regarding this. We also agree that the bilaterality of the lesions involving the corticospinal tracts suggest this may have been responsible for his clinical quadriplegia and now also mention this within the revised manuscript. Also, we and our staff neuroradiologist still feel that there the follow-up MRI of the cervical spine two months after the injury demonstrates an abnormal signal to the C6, but we also concede that this is arguable given the available images and changed the wording of this finding within the revised manuscript. We have revised the discussion section by shortening it and making it more concise especially with regards to the classification of electrical injuries. Respectfully, we felt that placing all of the figures on the same page would diminish the quality of the images. We have also changed the title of the paper to be more anatomically accurate with regards to the sites of electrical injury.

REVIEWER 2:

“This is a very well-written and well-presented case of delayed neurological manifestations of high-voltage electrocution. This is a rare presentation and is of interest to general medical practitioners. The discussion section is succinct and provides a timely review of electrocution injury to the nervous system. I don't think there are any flaws in the paper.”

We thank Reviewer 1 for his comments.

Sincerely yours,

Richard A. Rison, M.D.