**Reviewer’s report**

**Title:** Acute transient spinal paralysis and cardiac symptoms following an accidental epidural potassium infusion - a case report.

**Version:** 0  **Date:** 01 Aug 2017

**Reviewer:** Giovanni Cucchiaro

**Reviewer’s report:**

PAGE 3

Line 2, replace usage with "use"

Line 2: the use of epidural catheters has become more common way more than 10 years ago

Line 9: advantages….Compared to what?

Line 14: the sentence should read: "The placement of thoracic epidural catheters can also significantly lower the incidence of postoperative pneumonia"

Line 24: Application is probably the wrong term. Did the Authors mean "placement"?

Line 24: It is quite controversial that need to place epidural catheters only in "conscious" patients. There is plenty of evidence in the pediatric literature that the placement of epidural catheters in anesthetized children is quite safe

Case presentation: The case is very poorly presented. What was the medical condition that brought him to have an epidural catheter placed? Was he just admitted to the hospital for the placement of a catheter? That does not seem like a standard procedure for "low back pain".

The timeline of the events is missing, the details of the symptoms are also missing.

Line 49: What is Charlson comorbidity? There is the need at least for a reference

Line 49: The entire first sentence does not make any sense. The authors have to re-write it because it is unclear why the patient was admitted to the hospital.

Line 56: What is Th 7-8? It should read: at the T6-8 thoracic level and an infusion of Ropivacaine 0.2% at 4 ml/hr……

Line 59: Ropivacaine

Line 59: "Pain free mobilization…." It should actually read: It was possible at this point for the patient to be mobilized without pain.
Line 59: Why were Potassium levels checked? And what were the levels?

Line 61: what was the medical condition? It is quite unusual to develop hypokalemia out of nowhere.

PAGE 4

Line 10: who connected the different lines? The doctors? The nurses?

Line 14: Motor block, not "Motoric blockade"

Line 17: Noticed rather than "documented"

Line 17: how do you do an epidural lavage?

Line 29: why steroids? What was the thinking process?

Line 34: Pain? What kind of pain and where was the pain?

Line 36: Morphine for anxiety? There are better medications. Also, was one relatively small dose of morphine sufficient to control the pain?

Line 36: "Due to…" should read: because of ensuing respiratory depression, an endotracheal tube was placed.

Again lack of details: was the patient awake, was he unconscious? Was he sedated for the procedure? Where was the patient? On the regular floor? In the intensive care unit?

Line 39: again it is unclear on which location all of this started and where the patient ended up? What is "our clinic"??

44: "circulatory situation" is not a medically correct terminology. We need more details of the hemodynamic changes that occurred after the infusion of potassium was started.

PAGE 5

Line 1: where is the "foamy and bloody secretions" came from? Was this the result of the potassium infusion or else?

Line 2: what is "calculated intravenous…." It does not make any sense in English. Also, why were antibiotic started? What was the thinking process behind it? And why that specific antibiotic?

Line 7: what kind of "ileus" are we talking about? What did it occur? Was it related to the potassium infusion? Or else? Why was there a need for an operation? And what kind of operation was done?
Again the sentence does not make any sense as it is written. It should read: A transthoracic echocardiogram showed a 40% lower ejection fraction. Also why do they call it lower?

The sentence should read: Troponin T values increased from the initial 376 pg/ml to 937 pg/ml six hours after the potassium infusion.

"subsequent". When these tests were done?

what is the "Further course"? how many hours? Days after the infusion of potassium?

Tolerable? What does it mean?

How could an intubated patient experience "exertional dyspnea"?

"Weaning" from what?

When these tests were done?

Here we suddenly start talking about neurologic symptoms. However, there is no mention of them before. They should describe them from the beginning of the case!

Single not "singular"

"literature". They need to provide references

infusion, not "perfusor"

a set of symptoms similar to those we observed in our patient

PAGE 6

Symptoms usually include….

Tachycardia and hypertension has also been reported

"Latency…" How long? Minutes? Hours?

"sedation" there is no mention in the case description of sedation. Where is this coming from?

"Takotsubo cardiomyopathy", what is this?

"assumed"? it should read: liu et al. hypothesized in their case report that….

The entire sentence does not make any sense as it is written. How does the epidural potassium spread in the CSF? How does it trigger an increased sympathetic tone?
Line 44: As above, the sentence is not clear. What kind of hormones are we talking about? How does this relate to the Takotsubo cardiomyopathy?

Line 51: "symptom complex". It should read: for the physical events triggered by the epidural infusion of potassium.

Line 53: "application of steroids"? where (I suspect intravenous administration)? Which steroid? Dose?

PAGE 7

Line 5: the sentence has to be rewritten: attempts were made by whom???

Line 7: "Kulka et al. assumed." The sentence is not in English. I think they meant: Kulka suggested that the infusion of a saline solution can lower the potassium concentration in the CSF…

Line 14: change "further" with another.

Line 17: another sentence that does not make sense. What is the relationship between respiratory depression and edema with improved sensory level? What do they mean by sensory level?

Line 32: "subdural"? where is this coming from" did they mean sub-arachnoid? And what kind of cells are they talking about?

Line 34: with the exception of the one case….

Line 34: most of the cases presented in the literature reported a complete remission of the neurologic symptoms/complications.

Line 46: "application" is the wrong term. Also, what is "organizational and patient-related reasons"? it do not really mean anything….

Line 61: What is "spinal cord syndrome"?

PAGE 8

Line 2: why is there a need for "further diagnostic measures"? and what are they???

Line 9: "Intensive care"? what do they mean by that?

LEGEND of Figures and Tables need to be developed by adding complete sentences describing what they actually represent with explanation of the abbreviations used.

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If not, please specify what is required in your comments to the authors.
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