Reviewer's report

Title: NEUROPSYCHOLOGICAL outcome after carbon monoxide exposure following a storm

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Reviewer: Hsiu-Ling Chen

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1. The authors compared the follow-up neuropsychological differences in patients suffering from carbon monoxide (CO) poisoning during the Klaus storm with normal controls. The main findings were that patient group had worse neuropsychological sub-test results compared to healthy controls, specifically on processing speed, executive function, short-term and verbal episodic memories. They also revealed depression and post-traumatic stress syndrome compared to controls.

2. The strength of this study is, to evaluate CO poisoning patients during storm. The cause of CO poisoning differs from suicide attempt, which is more severe exposure.

[Major Compulsory Revisions]

3. However, in method, the diagnosis of CO poisoning was not clear enough.

4. The initial clinical disease severity was not demonstrated, such as duration of CO exposure, initial coma scale, COHb level during acute phase and brain structure injury or not by imaging evaluation.

5. Besides, hypoxia due to other causes, such as other chemical intoxication during storm, should be excluded.

6. In results, the detail results of neuropsychological tests should be demonstrated to display the score based on original or corrected data.

7. The symptoms of CO poisoning may be initial presented with following lucid period or continuing persistence, or further developed; however, we cannot get the information from the manuscript.

8. In result and table 1, patients revealed some symptoms during study evaluation, but these symptoms may be caused by other reasons. Suggest clarify it.

9. Furthermore, the correlation between clinical severity and neuropsychological results may be performed to clarify the relationship between severity of CO poisoning and cognitive outcome.

[Minor Essential Revisions]

10. In figure 1, what the “D value” means?

Level of interest: An article of limited interest
Quality of written English: Not suitable for publication unless extensively edited

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Declaration of competing interests:
I declare that I have no competing interests.