



## Letter

## Author's reply – Clinical characteristics and outcomes of patients undergoing surgeries during the incubation period of COVID-19 infection

Shaoqing Lei<sup>a</sup>, Fang Jiang<sup>b</sup>, Zhong-Yuan Xia<sup>a,\*</sup>, Zhengyuan Xia<sup>b,\*</sup>

<sup>a</sup> Department of anesthesiology, Renmin Hospital of Wuhan University, Wuhan, Hubei, China

<sup>b</sup> Department of anesthesiology, the University of Hong Kong, Hong Kong, China

### ARTICLE INFO

#### Article History:

Received 21 April 2020

Accepted 21 April 2020

Available online 29 April 2020

We thank Minervini et al. and Shakiba et al. for their letters in response to our recent study [1]. We concur with Minervini and colleagues that comparison with comorbidity and age-matched, COVID-19 negative controls should have strengthened the scientific merit of the research. However, during the period of the research the participating hospitals performed approximately 15,000 elective surgeries. Due to the lack of recognition of the disease at a very early stage of the pandemic, some patients with potential infection were unintentionally scheduled for elective surgeries. And, it is not that suitable for us to retrospectively pick up (difficult to be randomly) some COVID-19 negative controls. So, our initial goal was to report the clinical characteristics and outcomes of the patients. Nevertheless, our conclusion that surgery during incubation period of COVID-19 increases mortality should be generalizable. This can be strengthened by Shakiba and Iran's mention that the mortality rate for surgical patients with ASA-II was between 0.3–1.4%, and 1.8–4.5% for ASA-III [2]. In our study, the majority of the patients' condition was ASA I–II,

with two patients in ASA-III. However, these two patients survived surgery. In addition, of the 34 patients, 30 underwent general anesthesia with endotracheal intubation and 4 underwent epidural anesthesia. We appreciate the chance to add this information. Our analysis showed that it was primarily the complexity and duration of surgeries (i.e. the degree of surgical trauma) but not (or less) the type of anesthesia nor ASA class that played a major role in activating/exacerbating the latent COVID-19 infection. The mortality of non-surgical patients with COVID-19 in Wuhan at that time was between 4.3% and 15% as reported [3].

### Declaration of Competing Interest

None.

### References

- [1] Lei, et al., et al. Clinical characteristics and outcomes of patients undergoing surgeries during the incubation period of COVID-19 infection. *EClinicalMedicine* 2020. doi: [10.1016/j.eclinm.2020.100331](https://doi.org/10.1016/j.eclinm.2020.100331).
- [2] Daabiss M. American society of anaesthesiologists physical status classification. *Indian J Anaesth* 2011;55(2):111–5.
- [3] Jiang F, Deng L, Zhang L, Cai Y, Cheung CW, Xia Z. Review of the clinical characteristics of coronavirus disease 2019 (COVID-19). *J Gen Intern Med* 2020. doi: [10.1007/s11606-020-05762-w](https://doi.org/10.1007/s11606-020-05762-w).

DOI of original article: <http://dx.doi.org/10.1016/j.eclinm.2020.100362>, <http://dx.doi.org/10.1016/j.eclinm.2020.100331>.

\* Corresponding authors.

E-mail addresses: [xiazhongyuan2005@aliyun.com](mailto:xiazhongyuan2005@aliyun.com) (Z.-Y. Xia), [zyxia@hku.hk](mailto:zyxia@hku.hk) (Z. Xia).

<https://doi.org/10.1016/j.eclinm.2020.100363>

2589-5370/© 2020 The Author(s). Published by Elsevier Ltd. This is an open access article under the CC BY-NC-ND license. (<http://creativecommons.org/licenses/by-nc-nd/4.0/>)