Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Pharmacological Research 185 (2022) 106447

Contents lists available at ScienceDirect

Pharmacological Research

journal homepage: www.elsevier.com/locate/yphrs

Concerns about methodology on "Curbing COVID-19 progression and mortality with traditional Chinese medicine among hospitalized patients with COVID-19"

ARTICLE INFO

Keywords
COVID-19
Traditional Chinese Medication
Residual confounders

Dear Editor,

In their recent article published in Pharmacological Research, Tseng et al. investigating the effect of the Traditional Chinese Medication (TCM) formulae NRICM101 and NRICM102 on the clinical outcomes of unvaccinated and hospitalized patients with laboratory confirmed mild-to-severe COVID-19 [1]. Although Tseng et al. demonstrated that oral TCM NRICM101 and NRICM102 plus usual care provide additional benefits in reducing the risk of intubation, intensive care unit admission and death than the controls, [1] we have several concerns about some residual confounders.

First, despite the similar distribution of baseline characteristics (age, sex, BMI, smoking, alcohol consumption, and most comorbidities) between the TCM and control groups, the two groups did not have balanced proportions of chronic heart disease and chronic lung disease. The TCM group NRICM101 even had more participants receiving remdesivir and dexamethasone than the control group, which may have biased their reporting [2].

Second, for retrospective cohort study based on hierarchical data in survival analysis, it is crucial to consider the problem of correlation within the same stratum (eg. data from the same hospital will be more similar, while the data from hospital to hospital will be different). It is therefore recommended to consider a Cox model with frailty, taking into account the correlation (described by random effects) within clusters at each levels of hospital [3].

Third, as the authors mentioned in their study, they intentionally excluded patients who received the COVID-19 vaccine and those who were prescribed Paxlovid during their study. The readers may be very interested in further studying the interactions between these medications to more closely match the real-world situation.

Conflict of interest disclosures

None reported.

Data Availability

No data was used for the research described in the article.

References

[1] Y.H. Tseng, S.J. Lin, S.M. Hou, C.H. Wang, S.P. Cheng, K.Y. Tseng, M.Y. Lee, S. M. Lee, Y.C. Huang, C.J. Lin, C.K. Lin, T.L. Tsai, C.S. Lin, M.H. Cheng, T.S. Fong, C. I. Tsai, Y.W. Lu, J.C. Lin, Y.W. Huang, W.C. Hsu, H.H. Kuo, L.H. Wang, C.C. Liaw, W. C. Wei, K.C. Tsai, Y.C. Shen, W.F. Chiou, J.G. Lin, Y.C. Su, Curbing COVID-19 progression and mortality with traditional Chinese medicine among hospitalized patients with COVID-19: a propensity score-matched analysis, Pharmacol. Res. 184 (2022), 106412.

[2] S. Antinori, M.V. Cossu, A.L. Ridolfo, R. Rech, C. Bonazzetti, G. Pagani, G. Gubertini, M. Coen, C. Magni, A. Castelli, B. Borghi, R. Colombo, R. Giorgi, E. Angeli, D. Mileto, L. Milazzo, S. Vimercati, M. Pellicciotta, M. Corbellino, A. Torre, S. Rusconi, L. Oreni, M.R. Gismondo, A. Giacomelli, L. Meroni, G. Rizzardini, M. Galli, Compassionate remdesivir treatment of severe Covid-19 pneumonia in intensive care unit (ICU) and Non-ICU patients: clinical outcome and differences in post-treatment hospitalisation status, Pharmacol. Res. 158 (2020), 104899.

[3] A. Gasparini, M.S. Clements, K.R. Abrams, M.J. Crowther, Impact of model mis-specification in shared frailty survival models, Stat. Med. 38 (23) (2019) 4477–4502.

Renin Chang[a,1], Cheuk-Kwan Sun[b,c,1], Yao-Min Hung[d,e,*]

[a] *Department of Emergency Medicine, Kaohsiung Veterans General Hospital, Kaohsiung, Taiwan*

[b] *Department of Emergency Medicine, E-Da Hospital, Kaohsiung City, Taiwan*

[c] *School of medicine for international students, College of Medicine, I-Shou University, Kaohsiung City, Taiwan*

[d] *College of Health and Nursing, Meiho University, Pingtung, Taiwan*

[e] *Department of Internal Medicine, Kaohsiung Municipal United Hospital, Kaohsiung, Taiwan*

[*] Corresponding author at: College of Health and Nursing, Meiho University, Pingtung, Taiwan.
E-mail addresses: rhapsody1881@gmail.com (R. Chang), lawrence.c.k.sun@gmail.com (C.-K. Sun), ymhung1@gmail.com (Y.-M. Hung).

[1] These authors share first authorship

https://doi.org/10.1016/j.phrs.2022.106447
Received 5 September 2022; Received in revised form 6 September 2022; Accepted 8 September 2022
Available online 13 September 2022