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.

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Letter to the Editor

The use of Traditional Chinese Medicines to treat SARS-CoV-2 may cause more harm than good

Dear Sirs,

We wish to reply to the article entitled "Traditional Chinese medicine for COVID-19 treatment" published in this journal by Ren et al. [1].

The article expounds the benefit of Traditional Chinese Medicine (TCM) for the treatment of the illness called COVID-19 resulting from the novel coronavirus SARS-CoV-2, stating, "clinical practice results showed that traditional Chinese medicine (TCM) plays significant role in the treatment of COVID-19, bringing new hope for the prevention and control of COVID-19" and that "early intervention of TCM can effectively prevent the disease from transforming into severe and critical disease" [1]. The authors in particular recommend the use of the *qingfei paidu* decoction (QPD) which contains a large number of primary constituents, outlined in the article [1]. The quoted efficacy of this compound is a cure rate of "over 90 %" [1]. Although this figure sounds impressive, when compared to the current mortality rate attributed to the novel coronavirus, of between 1–3 %, its suggested therapeutic effect may be no better than placebo. We note the authors are not alone in promoting a role of TCM in the treatment of COVID-19, with the use of TCM appearing in recent guidelines derived from the initial epicentre of the disease in Wuhan China [2].

We wish to highlight significant concerns regarding the association between traditional herbal medicines and severe, non-infective interstitial pneumonitis and other aggressive pulmonary syndromes, such as diffuse alveolar haemorrhage and ARDS which have emerged from Chinese and Japanese studies particularly during the period 2017 – 2019. Initially the association between traditional herbal therapies and pneumonitis was based on isolated case reports. These included hypersensitivity pneumonitis associated with the use of traditional Chinese or Japanese medicines such as Sai-rei-to, Oren-gedoku-to, Seisin-renshi-in and Otsu-ji-to (9 references in supplemental file). Larger cohorts and greater numbers now support this crucial relationship. In a Japanese cohort of 73 patients, pneumonitis development occurred within 3 months of commencing traditional medicine in the majority of patients [3], while a large report from the Japanese Ministry of Health, Labor and Welfare, described more than 1000 cases of lung injury secondary to traditional medications, the overwhelming majority of which (852 reports) were described as 'interstitial lung disease [4].

Currently the constituent of traditional herbal medicines which is considered most likely to underlie causation of lung disease is *Scutellariae Radix* also known as Skullcap or ou-gon, which has been implicated through immunological evidence of hypersensitivity as well as circumstantial evidence, being present in all of those medicines outlined above [3]. Notably, skullcap is a constituent of QPD as used and described in the paper by Ren et al. relating to COVID-19 [1]. *Scutellariae Radix-induced* ARDS and COVID-19 disease share the same characteristic chest CT changes such as ground-glass opacities and airspace consolidation, therefore distinguishing between lung injury due to SARS-CoV-2 and that secondary to TCM may be very challenging. The potential for iatrogenic lung injury with TCM needs to be acknowledged [5].

Morbidity and mortality from COVID-19 are almost entirely related to lung pathology [6]. Factors which impose a burden on lung function such as chronic lung disease and smoking are associated with increased risk for a poor outcome. Severe COVID-19 may be associated with a hypersensitivity pneumonitis component responsive to corticosteroid therapy [7]. Against this background the use of agents with little or no evidence of clinical efficacy and which have been significantly implicated in causing interstitial pneumonitis that could complicate SARS-CoV-2 infection, should be considered with extreme caution.

In conclusion, the benefits of TCM in the treatment of COVID-19 remain unproven and may be potentially deleterious. We recognise that there is currently insufficient evidence to prove the role of TCM in the causation of interstitial pneumonitis, however the circumstantial data is powerful and it would seem prudent to avoid these therapies in patients with known or suspected SARS-CoV-2 infection, until the evidence supports their use.

Declaration of Competing Interest

There are no conflicts to declare.

Appendix A. Supplementary data

Supplementary material related to this article can be found, in the online version, at doi:https://doi.org/10.1016/j.phrs.2020.104776.

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