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

Assessment of elevated high-sensitivity troponin T to predict different mortality risks in patients with COVID-19

Dear Editor,

I have read the article entitled "Disinct etiologies of high-sensitivitity troponin T elevation predict different mortality risks for patients hospitalized with COVID-19" by Pegah Khaloo et al. [1] with great interest, recently published in this journal. The investigators reported that elevated high-sensitivitity troponin T (Hs-TnT) of distinct etiology in the context of COVID-19 was associated with a significantly increased mortality risk. Thanks a lot for the authors and the research. These findings implied that elevated Hs-TnT could be an additional and useful marker to predict mortality risks in patients hospitalized with COVID-19, especially in those with a primary cardiac etiology.

Data from China have shown that the high mortality rate in COVID-19 patients is associated with comorbid conditions [2]. Irawaty Djaharuddin et al. reported that hypertension, cardiovascular disease and diabetes were the most common comorbidity in patients' death due to COVID-19, and more than half of the patients had two or more comorbidities [3]. Firstly, the mortality rate was higher among elderly patients with COVID-19 and those with chronic comorbidities including chronic obstructive pulmonary, hypertension, diabetes and cardiovascular diseases [4]. Secondly, previous studies have indicated that cardiovascular events in patients with COVID-19 are associated with worse outcomes [5,6]. The increased risk of cardiovascular events such as myocardial injury and heart failure in the context of COVID-19 infection might be associated by inflammation, endothelial dysfunction, microvascular injury and hypoxemia[2]. Thirdly, Hs-TnT is the preferred biomarker for the detection of myocardial injury. Ozan M. Demir, et al. have found that Hs-TnT elevation does not represent major myocardial injury but acts as a sensitive integrated biomarker of global stress in most cases [7]. Several COVID-19 studies have often emphasized the association between elevated Hs-TnT concentrations and adverse events [8]. However, Hs-TnT elevation may be the consequence of a primary cardiac event or a secondary cardiac event provoked by non-cardiac illness such as pulmonary embolism, renal failure or sepsis [9].

In conclusion, Hs-TnT elevation alone is not a sufficient biomarker to predict different mortality risks in patients. Clinicians should combine Hs-TnT elevation in distinct etiologies, the age and comorbidities in patients with COVID-19 to predict mortality risks, particularly in those with a primary cardiac etiology.

Declaration of Competing Interest

The authors report no relationships that could be construed as s conflict of interest.

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