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Letter to the Editor

# Reply to letter to the editor: Revascularization strategy in patients with acute ST-elevation myocardial infarction amid COVID-19 pandemic



We thank Dr. Chia Siang Kow for their letter about our recent publication of the consensus for management of acute coronary syndrome in patients with suspected or confirmed coronavirus disease 2019 (COVID-19) in Taiwan.<sup>1</sup> We completely agree with the point they indicated in the letter that primary percutaneous coronary intervention (PCI) is preferred to fibrinolytic therapy as the reperfusion strategy for ST-elevation myocardial infarction (STEMI). In fact, in the recently published 2020 Taiwan STEMI guideline,<sup>2</sup> we recommended all STEMI patients in Taiwan to receive primary PCI because of the well-organized hospital system for 24-hour primary PCI and convenient traffic system for transportation in Taiwan. However, fibrinolysis is still recommended in some special occasions, such as during severe pandemic infectious diseases or in adjacent small islands without PCI available hospitals.<sup>2</sup> The previous invasion of severe acute respiratory syndrome (SARS) from China to Taiwan in 2003 caused intrahospital cluster cases of infection and shut-down some of the major hospitals in Taiwan. Rapid reperfusion with primary PCI becomes exceedingly difficult if the similar events occur again during the COVID-19 pandemic. Therefore, based on the experience of SARS, our consensus suggests that fibrinolytic therapy could be considered before primary PCI if there is concern of nosocomial viral transmission. However, we are not saying that primary PCI cannot be performed. Our consensus recommends that primary PCI can be performed if adequate personnel protection can be maintained during intervention and regulations be followed according to the infection control team's suggestions in the hospital. The Figure 2 in our consensus even demonstrated the detailed steps to wear personal protective equipment in cardiac catheterization laboratory.<sup>1</sup>

Fortunately, the COVID-19 pandemic has minimal influence in Taiwan so far. As to July 2020, there were only 475 confirmed cases in 23 million populations in Taiwan. Early actions were taken in all major hospitals from January 2020 to prevent nosocomial spread when local transmission of COVID-19 occurred in Taiwan.<sup>3</sup> There has been no community outbreak nor large scale in-hospital transmission of COVID-19 in Taiwan. Recently, a nationwide survey on 40 major primary PCI hospitals during the COVID-19 pandemic in Taiwan showed that primary PCI was still the choice of reperfusion therapy and none of the hospitals used fibrinolytics.<sup>4</sup> Overall, cardiologists in 9 out of the 40 hospitals (22.5%) had experiences of wearing personal protective equipment to perform PCI for suspected cases with COVID-19 in Taiwan.<sup>4</sup> The data indicated that consensus or guideline is a general guidance but not strict regulation about what the clinicians should do. Adequate medical decision still should be determined individually based on the clinicians' judgment and overall situation.

## Conflicts of interest

The authors have no conflicts of interest relevant to this article.

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## References

1. Li YH, Wang MT, Huang WC, Hwang JJ. Management of acute coronary syndrome in patients with suspected or confirmed coronavirus disease 2019: consensus from Taiwan Society of Cardiology. *J Formos Med Assoc* 2021 Jan; **120**(1 Pt 1):78–82.
2. Li YH, Lee CH, Huang WC, Wang YC, Su CH, Sung PH, et al. 2020 focused update of the 2012 guidelines of the Taiwan Society of Cardiology for the management of ST-segment elevation myocardial infarction. *Acta Cardiol Sin* 2020; **36**:285–307.
3. Liu YC, Liao CH, Chang CF, Chou CC, Lin YR. A locally transmitted case of SARS-CoV-2 infection in Taiwan. *N Engl J Med* 2020; **382**:1070–2.
4. Li YH, Huang WC, Hwang JJ. No reduction of ST-segment elevation myocardial infarction admission in Taiwan during coronavirus pandemic. *Am J Cardiol* 2020; **S0002–9149**(20):30607–X.

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