Disease-Specific Care certification program of acute myocardial infarction: Bring owls to Athens?

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Acute myocardial infarction (AMI) is one of the most common causes of death globally and its frequency is still increasing.[1] In Taiwan, heart disease, including AMI, is the second leading cause of death in the last decade. In 2018, heart disease accounts for 20 000 deaths (12% of all deaths) in Taiwan.[2] Nevertheless, the mortality rate in AMI patients is affected by many factors, such as old age, time to treatment, left ventricular ejection fraction, prior myocardial infarction, history of diabetes, chronic kidney disease, and so on. In the recent years, along with the greater use of revascularization therapy and guideline recommended medications, the mortality rate of AMI is decreasing.[3,4]

In Taiwan, the Disease-Specific Care (DSC) certification program was developed by the Joint Commission of Taiwan in 2009.[5] DSC certification program was designed to assess the quality of specific disease management among healthcare systems. Currently, the impact of DSC certification program on clinical outcome of AMI remains uncertain and is rarely reported in the literature. Thus, in the February issue of the *Journal of the Chinese Medical Association*, Liao et al present a retrospective, longitudinal, controlled study which was conducted by analyzing the nationwide Taiwan Clinical Performance Indicators dataset from 2011 to 2018.[6] The aim of that study was to investigate the effect of DSC certification on healthcare performance and clinical outcome of AMI. A total of 20 hospitals (9 certified and 11 uncertified hospitals) were eligible for analysis. In-hospital mortality was comparable between both groups at baseline. However, in-hospital mortality rates were significantly lower during and after certification periods than baseline in certified hospitals (6.8% vs 8.4%, p = 0.04; 6.7% vs 8.4%, p = 0.02), whereas there was no significant change on mortality in uncertified hospitals, leading to a significant difference between both groups during and after certification periods (odds ratio = 0.74 [95% CI = 0.60-0.91] and 0.78 [95% CI = 0.64-0.96]). Furthermore, the improvement in healthcare performance indicators (e.g. blood testing for low-density lipoprotein cholesterol level, prescribing a statin on discharge, and consultation for cardiac rehabilitation) was remarkable in certified hospital. The authors concluded that "the beneficial effect of DSC certification on clinical outcome of AMI probably mediated through quality improvement during the healthcare process."[6]

Although the study result is encouraging and promising, several inherent limitations including retrospective, observational design and small sample size (hospital level instead of patient level) were acknowledged by authors and make this study only hypothesis generating. In addition, the causal relationship between DSC certification and outcomes cannot be determined. Thus, further investigation is required to address this issue and confirm the result of the present study.

In conclusion, optimizing clinical outcomes and quality of care in AMI patents needs multimodal approaches. In this context, beyond pharmacotherapy and coronary revascularization, DSC certification program is the way to go further and provides a framework for continuous and standardized care. The question as to whether DSC certification program can improve clinical outcomes of AMI warrants further evaluations.

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