Revista Portuguesa de

Cardiologia

Portuguese Journal of **Cardiology**

EDITORIAL COMMENT

Regional myocardial infarction networks: How to improve quality

Redes regionais de enfarte miocárdio. Como melhorar a qualidade

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Primary percutaneous coronary intervention (PCI) is the preferred reperfusion strategy in patients with ST-elevation myocardial infarction (STEMI) and reduces the risk of cardiovascular death and recurrent myocardial infarction compared with thrombolysis.[1]

The time to reperfusion therapy is crucial, because the benefits of this therapy diminish with delays in treatment.[2] However, reperfusion therapy time delays remain excessively long in the real world, reducing the number of patients who could benefit from this treatment strategy.[3]

Organization of care between the emergency medical system (EMS) and hospitals in regional networks reduces reperfusion time delays in patients with STEMI, as well as hospital mortality.[4]

Assessing the quality of care has become part of modern healthcare. Quality indicators are the most appropriate tools for assessing quality of treatment in STEMI.[5]

One of the main quality indicators in STEMI is time delays, and all regional networks should regularly record them.

In this issue of the *Journal*, Claudio et al.[6] present a study aiming to analyze the coronary pathway in the Alentejo region of Portugal in terms of time delays, taking into consideration the place of first medical contact (FMC). They retrospectively analyzed 1962 consecutive patients admitted to their center with STEMI to undergo PCI between 2013 and 2022. Most of the patients came from outside their PCI center. Primary care physicians (PCPs) and non-PCI centers accounted for most referrals, with 525 (26.9%) and 519 (26.6%) patients, respectively, followed by the EMS group (500 patients − 25.6%).

In this study, non-PCI centers had significantly longer FMC to diagnosis delay, as well as diagnosis-to-wire delay, than the other groups. Only 2.2% of patients met the 10-min FMC to diagnosis target and 44.8% met the target of 90 min from diagnosis-to-wire in transferred patients, while 40.6% of patients met the 60-min target for patients admitted to a PCI center. Median patient, electrocardiogram (ECG) and logistic delays were 92.0 min (interquartile range [IQR] 146.0), 19.0 min (IQR 47.0) and 15.5 min (IQR 46.3), respectively.

The authors concluded that there was a significant difference between state-of-the-art targets and the reality, varying according to the place of FMC, with the worst delays in non-PCI centers.

There were significant delays across all groups in ECG acquisition and STEMI diagnosis, which were more marked in non-PCI centers. This draws attention to the need to implement measures that ensure that an ECG is performed within 10 min of FMC.

Logistic delays (in transferring the patient after diagnosis) were also significantly longer in non-PCI centers than in the other groups (in non-PCI centers only 29.4% of patients met the diagnosis-to-wire target time of less than 90 min), which highlights the importance of non-PCI centers being organized in such a way that they can transfer a patient immediately after the diagnosis of STEMI.

When the authors analyzed changes in delays over the years, they found no significant improvement in STEMI care from 2013 to 2022.

This work highlights the need for treatment delays to be systematically recorded and audited, in order to detect avoidable systematic delays and to implement measures at community, hospital, and EMS levels to improve the effectiveness of the healthcare pathway and the quality of care.

Conflicts of interest

The author has no conflicts of interest to declare.

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