Revista Portuguesa de Cardiologia 41 (2022) 229–230

Revista Portuguesa de
Cardiologia
Portuguese Journal of Cardiology
www.revportcardiol.org

EDITORIAL COMMENT

Impact of the first COVID-19 wave on quality of care in acute coronary syndrome – the importance of information for health policy design

Impacto da primeira vaga COVID-19 na qualidade de tratamento da síndrome coronária aguda – a importância da informação na definição de política de saúde

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The recent and ongoing COVID-19 pandemic has imposed major stresses and pressure for adaptation on healthcare systems, with high resource consumption focused on a single threat, and has compromised the accessibility of diagnosis and treatment in major health areas, with short- and long-term consequences that are not yet fully understood.

The current edition of the *Journal*[1] presents the results of a multinational survey by the Stent-Save a Life (SSL) initiative that explores and illustrates the impact of the COVID-19 outbreak on the rate of primary percutaneous coronary intervention (PPCI) in the setting of ST-elevation myocardial infarction (STEMI). The authors used a cross-sectional descriptive and observational design to compare the numbers of acute coronary syndrome (ACS)/STEMI admissions and rates of PPCI in March and April 2020 with the corresponding period of the previous year. Information was collected from 17 of the 32 SSL member countries using data from national registries or from local non-nationwide databases.

These options resulted in significant methodological constraints. Collection of data was heterogeneous. The study design was the least informative of all choices, comparing just two points in time, not considering pre-existing trends or concurrent factors. Regression discontinuity or interrupted time series would be more appropriate designs but would require robust and systematic data collection, which is not feasible in many countries. The time lag of the first COVID-19 wave between countries could have been explored through the use of a difference in differences analysis or synthetic control models, attenuating the effect of concurrent factors. However, the latter option would have required the extraction of large quantities of data, which once again would not be available in many countries. These methodological limitations, which are shared by many other contemporary publications,[2–13] should be the first point on which to reflect. To adequately assess quality of care in ACS, more and better information would be needed. Quality improvement interventions should be focused on the needs and weaknesses of healthcare systems, which can only be identified through the analysis of robust data. Moreover, the effect of such interventions can only be properly assessed through the analysis of valid information collected systematically over time. The implementation of pragmatic and

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DOI of original article: https://doi.org/10.1016/j.repc.2021.04.006

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https://doi.org/10.1016/j.repc.2022.01.001

affordable nationwide registries, using meaningful and easily auditable variables, should be a priority in the fight for better ACS outcomes.

The authors reported decreases in admissions for ACS (mean reduction 27.5%), STEMI (mean reduction 20.5%) and PPCI rate (mean reduction 26.7%) in 16 out of 17 countries. Despite the above-mentioned methodological limitations, it is likely that the first COVID-19 wave had a significant impact across a variety of geographical areas, considering the consistency and volume of the reported variations, as well as data reported by other authors.[2–13] It is important to note that the impact of COVID-19 cases was relatively low in many of the studied countries in the period under analysis, and therefore the fall in admissions cannot be attributed to overloading of healthcare systems. In these countries, in the period under study, hospital avoidance due to fear of exposure may have played a pivotal role. This hypothesis could have been tested with population surveys and by looking for indirect indicators such as increased late presentation of ACS and ACS mortality. Nonetheless, these indicators also require collection of good quality data. In this regard, the authors cited a study based on the Lombardia Cardiac Arrest Registry in Italy,[7] which indicated a possible increase in untreated ACS cases revealed by a rise in out-of-hospital cardiac arrests during the first COVID-19 wave. However, it is not possible to establish a causal relationship, and other factors may have contributed or may even have been more important. Reports on the impact on mortality failed to irrefutably prove an increase in cardiovascular mortality, once again due to limitations in data collection.

On the other hand, the authors speculate on the possibility that there was a real decrease in the incidence of ACS, which is possible considering the beneficial effects of a general lockdown (lower levels of air and sound pollution, elimination of traffic-associated stress, remote working, etc.). This hypothesis could have been partially tested by comparing countries with different lockdown policies.

In summary, the authors express their concern about the quality of care and accessibility of timely treatment in the setting of ACS. The reductions in admissions may have resulted from a loss of trust in healthcare institutions and a failure of communication between health policy leaders and the general population. The authors stress the need to overcome barriers imposed by the COVID-19 pandemic, by establishing action plans, protocols and developing awareness campaigns. I could not agree more with this message. Empirically, the interventional cardiology and emergency medicine communities had the perception that the pandemic had a profound impact on the care of acute non-COVID-19 patients. However, it was not easy to convey this message to decision makers. Presentation of clear evidence was difficult due to the lack of consistent and good quality data in the majority of countries. Therefore, policy adjustments often did not occur, or occurred too late. Extracting data from public health systems, building evidence and responding promptly to acute changes is not an easy task. The systematic collection of meaningful and robust data that are accessible for analysis and interpretation is a necessary step on the way to improving quality and policy decisions. Nationwide registries should be promoted by medical societies, academic institutions, health providers and healthcare policy makers. Evidence-based health policy always relies on good quality information.

Conflicts of interest

The author has no conflicts of interest to declare.

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