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EDITORIAL COMMENT

The day after the COVID crisis

O dia após a crise da COVID

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In the current issue of the *Journal*, Braga et al.[1] analyze the changes in primary percutaneous coronary intervention (PCI) during the first COVID-19 wave, quantifying and comparing the number of PCIs performed for ST-elevation myocardial infarction (STEMI), non-ST-elevation acute coronary syndromes (NSTE-ACS) and chronic coronary syndromes (CCS) with the corresponding period in previous years, based on data from the Portuguese Registry on Interventional Cardiology (RNCI). The total number of PCI procedures decreased significantly during the initial COVID-19 wave in Portugal (−36%), and PCI procedures for STEMI, NSTE-ACS and CCS fell by 25%, 20% and 59%, respectively. The authors conclude that compared with the corresponding period of the previous three years, the number of PCI procedures performed for STEMI and CCS was markedly lower during the first wave of the COVID-19 pandemic in Portugal.

Several other countries and societies have reported reductions in the number of patients admitted to hospitals with STEMI. A study by Tam et al. from Hong Kong, China, drew attention to the impact of COVID-19 in time components of STEMI patients.[2] In a study by Rodriguez-Leor et al. in Spain, there was a significant decrease in coronary interventions (−48%) and in STEMI (−40%) compared to the corresponding periods in 2019 and 2020.[3] Similarly, a lower rate of hospital admissions for ACS was observed during the COVID-19 outbreak in northern Italy.[4] Also in Italy, a nationwide survey collected data on admissions for STEMI throughout a one-week period during the COVID-19 outbreak and observed a 48.4% reduction in admissions for myocardial infarction (MI) compared to the equivalent week in 2019.[5,6]

The European Society of Cardiology also launched a worldwide electronic questionnaire that was designed to capture the views of cardiologists and cardiovascular nurses with regards to changes in frequency and timing of STEMI admissions.[7] Overall, there was a perception that the number of admissions of patients with STEMI was substantially reduced, by more than 40% according to more than half of respondents.

We can only speculate about the causes of these reductions in the number of PCIs, which were probably multifactorial. What is known is that the number of patients admitted to hospitals and treated by PCI decreased, and the most obvious explanation is that patients avoided hospitals for fear of becoming infected. Based on the Lombardia Cardiac Arrest Registry, Baldi et al.[8] compared out-of-hospital cardiac arrest (OHCA) during the pandemic period in Italy with the same period in 2019. An increase of 58% in OHCA was observed, which supports the hypothesis that patients with acute coronary syndromes (ACS) were choosing not to go to the hospital.

The possibility that there was in fact a fall in the incidence of ACS cannot be excluded. Reductions in physical exercise due to lockdown, the adoption of teleworking, lower levels of atmospheric pollution and other related drastic changes in people's habits may have influenced the stability of atherosclerotic plaques.[9]

Now that the pandemic crisis is showing signs of coming under control in countries with greater resources and high vaccination rates, interventional cardiology activity is

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expected to return to pre-2020 levels. The question is what lessons we can learn from this crisis and what we should do to avoid disruption of health services when faced with future pandemics or even a more aggressive outbreak of this coronavirus.

Starting with cardiovascular disease, even before the pandemic we were far from able to provide an adequate response to the population's needs. Difficulties in accessing general and family medicine, as well as waiting lists for appointments and surgery, were then aggravated by the pandemic. The situation after the pandemic will be even more problematic, as for two years many patients were not correctly diagnosed or appropriately treated, in addition to the new patients who need to use a system that was already overwhelmed. Underfunding of health structures, mismanagement of human resources and low public sector salaries are putting the spotlight on the National Health Service's capacity to respond to the needs of the Portuguese population.

Before the pandemic, various weaknesses in ACS treatment had already been identified. Concerning STEMI, patient delay in Portugal has remained virtually unchanged for several years, highlighting the importance of maintaining awareness campaigns for ACS.[10] The Portuguese Society of Cardiology has an important role to play in the task of improving health literacy for cardiovascular disease. System delay is also far from ideal, as connections between hospitals with and without interventional cardiology remain a significant problem due to the inefficiency of secondary transportation.[11]

It is clear that the world was not prepared for a situation that posed such challenges to health systems, with extremely high numbers of hospitalizations and a high risk of contagion for both patients and personnel. The strategies that have been used to deal with the pandemic must be revised and refined in order to be better prepared for future crises. The first lesson to be learned is that the strategy of moving the production of personal protective equipment, medical devices, ventilators, etc., to Asian countries could leave the European population in a very vulnerable position. This millennium has not brought a more peaceful world. In addition to the worsening climate crisis, which will lead to a greater gap between rich and poor countries, there is also increasing political instability with deteriorating relations between the USA, Russia and China, while tensions in the Middle East are far from being resolved. In this global arena conflicts with biological or chemical warfare could potentially occur and the scenario of health systems needing to respond to multitudes in disaster situations cannot be ruled out. Also, natural forms of pandemic spread of this or other viruses are likely to occur. Faced with these strong pressures on health systems, hospitals must be able to respond appropriately to situations of great stress caused by the need to deal immediately with large numbers of victims. Now that there appears to be some relief from the COVID-19 pandemic, even if temporary, governments, health managers and health professionals must draw lessons from this epidemic and prepare for the future.

Conflicts of interest

The author has no conflicts of interest to declare.

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