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Out-of-hospital cardiac arrest during the COVID-19 era: The importance to fight against fear



Dear Editor,

We read with great interest the paper from Ong et al. about the out-of-hospital cardiac arrest (OHCA) and the cardio-pulmonary resuscitation (CPR) during COVID-19 pandemic [1]. As highlighted by the authors, an impressive increase in OHCA incidence has been observed especially in countries with a higher incidence of COVID-19 cases. This may be the consequence of both direct effect of the SARS-CoV-2 infection and indirect effect of the spread of the pandemic [2]. On the other hand, a similar OHCA increase was not observed in the countries where the COVID-19 incidence remains quite low [3]. However, a very alarming issue has to be highlighted: the survival of OHCA patients has dramatically declined both in the countries most affected by the pandemic and in those affected only marginally. In Victoria region in Australia, for example, where an increase in OHCA was not observed and where the COVID-19 incidence during the first pandemic wave was very low, the survival to hospital discharge decreased by 50% during the period March–May 2020 (6.1% in 2020 versus 11.7% in the previous years) [3]. These results were confirmed also in meta-analysis involving studies from different part of the world, which highlighted a reduction in ROSC rate and an increase in OHCA patients' mortality during the pandemic [4]. This is probably due to a sum of multiple issues: change in OHCA characteristics with increase of non-shockable rhythm, delays in cares due to the pandemic and reduction in bystander response [5]. Regarding this latter point, as correctly stressed by Ong et al., a reduction in bystander CPR has been highlighted in many studies regarding OHCA during COVID-19 pandemic. Social distancing, reduction in OHCA which occurred in public location and quarantine had surely played a role, but another important issue should be considered: the fear of performing CPR. Alarming news about the reluctance of performing CPR on a stranger came to the attention of the scientific community as early as January 2020, when a 60-year-old Chinese man experiencing an out-of-hospital cardiac arrest outside of a restaurant in Sydney, very far from the pandemic core in that period. In that case, bystanders did not perform CPR for fear of being potentially infected by SARS-CoV-2 [6]. This is unfortunately quite understandable considering that the fear of infection was one of the more important fears among the lay people also before the pandemic [7] and that mouth-to-mouth ventilation was demonstrated to prevent a not negligible percentage of laypeople to be willing to perform CPR on a stranger after a BLS/AED course in pre-pandemic period [8]. The outbreak, especially considering that the transmission of SARS-CoV-2 occurred through aerosol [9], may have only exacerbated these fears [10]. The International Liaison Committee on Resuscitation (ILCOR) and the scientific societies have issued specific guidance regarding Basic Life Support (BLS) during the pandemic suggesting, for laypeople, to perform chest-compression

only CPR, withdrawing mouth-to-mouth ventilation, at least if the victim is a non-household member [11,12].

We believe that the scientific community interested in resuscitation should consider that the fear related to the COVID-19 pandemic and the fear of being infected by SARS-CoV-2 probably will last for several years [13]. The latest American Heart Association (AHA) [14] and European Resuscitation Council (ERC) [15] guidelines published in late 2020 and early 2021 respectively, have confirmed the role of mouth-to-mouth ventilation unaltered compared to the pre-COVID period, referring the specific adaptations related to the COVID-19 pandemic to the guidance notes mentioned above. This approach may be reasonable from a scientific point of view, as no new elements favouring chest-compression only CPR for laypeople in increase OHCA survival compared to standard CPR have been published recently. However, we believe that in this historical period we should try to combat the fear of performing CPR on a stranger by all possible means. One of the key elements to do so could be massive informative campaigns by the scientific society about that chest-compression only CPR is as effective as standard CPR in saving life. These campaigns should be addressed not only to the general population naïve in CPR training, but also to all the people who were trained in standard CPR before the pandemic and who are probably reluctant to start CPR during the COVID-era. We absolutely need to reassure all the potential lay bystander regarding the safety of performing chest-compression only CPR also in the pandemic period to overcome their possible fear and reluctance stressing also its effectiveness. The studies carried out so far have highlighted that one of the key ring of the chain of survival, the bystander CPR and the willingness to perform it [16], has been challenged by the SARS-CoV-2 with deleterious effect on ROSC and survival: we have to fight hard to strengthen it and prevent decades of effort on increasing bystander CPR from being swept away by the pandemic.

Declaration of Competing Interest

None to declare.

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