Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

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Letters to the Editor

COVID-19 Pandemic and Possible Rebound Phenomenon in Incidence of Acute Myocardial Infarction

To the Editor:

Multiple studies have observed reduced hospital admissions for acute myocardial infarction (MI) during the COVID-19 pandemic.[1,2] However, Fardman et al. describe a striking increase in hospitalizations for ST-segment elevation MI (STEMI), parallel with the persisting trend of reduced hospitalizations for non-STEMI after the first wave of the COVID-19 pandemic and social-distancing restrictions.[2]

Fear of getting infected by COVID-19, which may cause some patients to delay or completely avoid seeking medical help, has been suggested as a major factor for the reduced admissions for MI. This particularly applies to patients with non-STEMI, who often have less severe and remitting symptoms,[1] and could be an explanation for the persistent trend of reduced admissions for those MIs reported by Fardman et al.[2] In addition, reduced air pollution and decreased physical activities, both well-known triggers of MI,[3] could also play some role in the whole phenomenon.[1] As the onset of a significant number of MIs is determined by the presence of a possible trigger in a vulnerable patient,[3] we may assume that some of the cardiac events could be postponed, owing to a temporarily lower trigger frequency during the pandemic. To obtain further insight into exposure to possible triggering factors, it would have been very useful if Fardman et al.[2] had described antipandemic measures in greater detail, especially if the measures changed over the course of pandemic.

Although social distancing and fear of infection probably reduced exposure to some MI triggers, staying at home promoted sedentary behaviour, physical inactivity, and weight gain, all of which have negative effects on the metabolism, cardiovascular health, well-being, and quality of life and can potentially challenge a person's mental health. As such effects lasted for weeks and months, to some extent they could have exacerbated the population's cardiovascular-risk profile and created a greater number of vulnerable coronary patients. Moreover, several new pandemic-related MI triggers—such as lockdown stress, loneliness, financial stress, loss of job, cigarette smoking binges, anger, fear of contacting COVID-19 infection, and fear of lack of medical care—have been reported in the majority of COVID-19–free patients with MI.[4] One can hypothesize whether the presence of those new triggers partly contribute to a substantial increase in incidence that was observed for ST-segment elevation MIs, as those MIs likely require a more powerful trigger to set the stage for more extensive coronary atherothrombosis.[3] Accordingly, the rebound phenomenon described by Fardman et al. is a new and worrisome feature of the COVID-19 pandemic but not completely unexpected.

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