



## Missing heart attacks during confinement

### *Pocos infartos del miocardio en la pandemia de COVID-19*

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#### ABSTRACT

The current COVID-19 home isolation is perhaps a cause for a significant reduction in the presentation and late arrival of cases of myocardial and cerebral infarction. Several publications announce the significant drop of patient's volume with myocardial infarction in China, Italy, France, Spain and The United States, warning possible impact on global fatality and patient's disability, that may be higher than the COVID's related. This paper warns about similar behavior in Mexico with possible sequelae.

#### RESUMEN

*El aislamiento domiciliario actual de COVID-19 es quizás una causa de reducción significativa en la presentación y llegada tardía de casos de infarto de miocardio y cerebral. Varias publicaciones anuncian la caída significativa del volumen de pacientes con infarto de miocardio en China, Italia, Francia, España y Estados Unidos, advirtiendo un posible impacto en la mortalidad global y discapacidad, que puede ser mayor que la relacionada con COVID. Este artículo advierte sobre un comportamiento similar en México con posibles secuelas graves.*

#### INTRODUCTION

The current COVID-19 pandemic has caused a significant change in social behaviour, with the predominance of home isolation, due to the successful stay-at-home campaign. In several countries it has been noted that the fear of contagion in hospitals has caused a significant reduction in the presentation of cases of myocardial and cerebral infarction; not only are they fewer patients but those who finally arrive at the hospital do so much later than in the months corresponding to the last year.

One of the initial publications comes from the experience of a Hong Kong hospital, in which the delay between the onset of symptoms and arrival at the hospital, was four times longer. If we take into account that current protection strategies require more time to transfer patients to the Cath Lab, the total cost in time is even higher, with the consequent impact on mortality and complications.<sup>1</sup>

The Italian experience, based on a national and multicenter registry, observed a reduction in general admissions for heart attack of 48%

and more than 50% in the case of heart attacks with ST-elevation. These changes have statistical significance concerning the same months of 2019 and have a definite impact on mortality, with a risk ratio of 3.3.<sup>2</sup> The impact of increasing home cardiac arrests can also, be very significant, and some of Italy's regions reach almost 200%.<sup>3</sup>

A multicenter registry from France compared admission to intensive cardiac units of  $4.8 \pm 1.6$ , before confinement, to  $2.6 \pm 1.5$  patients per day, during confinement ( $p = 0.0006$ ). The authors confirm a dramatic drop in acute cardiovascular cases and consider that it is time to sound the alarm that these patients may suffer from inattention and severe consequences, with an increase in ambulatory myocardial infarctions, mechanical complications of heart attack, heart failure, unexplained deaths, among others.<sup>4</sup>

A Spanish study, with the heart attack code, which involved all the autonomous communities reported reductions of 40 to 81% in diagnostic and therapeutic cardiovascular procedures; warning about the risk of increased morbidity and mortality, and suggested that

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scientific societies and health authorities should promote that patients with heart attack symptoms demand assistance from the health system in order to receive reperfusion treatment adequately.<sup>5</sup> In this regard, it is worth reviewing a case published by Saquib Masroor, from The United States, of a complication that is already unusual, of the ruptured interventricular septum.<sup>6</sup>

A letter to the editor, from the New England Journal of Medicine, reveals that a phenomenon similar to myocardial infarction occurs with imaging studies of stroke cases in the United States, which could have an impact on acute fibrinolytic treatment.<sup>7</sup>

All the phenomenon has generated alarm in several countries, because myocardial infarction and cerebral infarction are prominent causes of death and disability, with a severe possible impact on general mortality and viability, accompanied by potentially disabling sequelae and with enormous costs of secondary and tertiary prevention and rehabilitation. For this reason, the Society for Cardiac Angiography and Intervention (SCAI) conducted a questionnaire that helps answer questions about why people with these problems and other emergencies do not go to hospitals, finding fear of contagion. The society actively encourages people to go to the hospital in case of symptoms.<sup>8,9</sup>

Cardiovascular diseases are the primary cause of death in México, with strategies that have been ineffective in themselves in the treatment of acute coronary syndrome and stroke, with one of the highest fatality rates among the countries of the Organization for Economic Co-operation and Development (OECD).<sup>10</sup> Addressing this problem during the pandemic could help reduce the impact of these entities' mortality and complications and would help remedy the previously observed high case fatality because the consequences are even more severe than those of coronavirus infection.

The members of the Mexican College of Interventional Cardiology and Endovascular Therapy (COMECITE for Colegio Mexicano de Cardiología Intervencionista y Terapia Endovascular) have the same perception of a reduction in the care of patients with myocardial infarction. We consider it urgent to start a parallel

campaign to confinement, with understanding and analyzing the phenomenon to inform the nation «stay home to avoid infection», but go to the hospital immediately, in case you have symptoms of myocardial infarction. This campaign must expose the consequences of the unattended heart attack and that the hospitals and all the health systems have reserved areas for the diagnosis and treatment of problems out of coronavirus contamination.

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