The COVID-19 pandemic and the associated lockdown that is being implemented in various countries has resulted in collateral damage to patients who do not have the disease. Lockdown has restricted the access of general patients to medical facilities. This is because of lack public transport to clinics and hospitals; because travel by private transport is restricted or prohibited; because patients fear going out, especially to hospitals, because of the risk of contracting COVID-19 infection; because clinics and hospitals are shut or are accepting only emergency cases; and because medical professionals do not want to risk contracting the infection from patients.[1] In different parts of the world, many or all of these reasons apply.

COLLATERAL DAMAGE TO PHYSICAL AND MENTAL HEALTH

As examples of collateral damage to physical health, the acute coronary syndrome is being treated late, heart failure is being left untreated, and surgery for cancer is being postponed. Some patients are dying as a result.[2] Very obviously, nonemergency medical care is restricted or unavailable for a range of distressing and troublesome disorders, from dental root infections to bleeding hemorrhoids, and from unstable glycemic control to urinary infections.[3]

As examples of collateral damage to mental and social health, people are uneasy and anxious, and the stresses associated with job insecurity, business losses, investment losses, forced changes in lifestyle, and other factors can trigger the onset of anxiety and depressive disorders or worsen existing disorders.[4] The forced, prolonged proximity with family can improve bonding but can also stress relationships; the latter may result in domestic abuse. Lack of access to alcohol and substances of abuse can result in withdrawal syndromes that are life-threatening.[5]

GUEST EDITORIAL

COVID-19 and lockdown: Delayed effects on health

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DELAYED RISKS TO PHYSICAL HEALTH

COVID-19 and the associated lockdown may also have effects that are associated with delayed risks to physical health. As an example, people trapped indoors during lockdown will get very little exercise. They will spend much time watching movies on television or on smartphones. They will snack more and eat more. They will gain weight. Weight that is gained is notoriously hard to lose. This means that persons who gain weight and who do not lose it afterward will be at increased risk of a large number of health problems, including diabetes, hypertension, ischemic heart disease, stroke, osteoarthritis of the knees, Alzheimer’s disease, and different types of cancer.[4] Because these adverse health outcomes occur years to decades later, depending on the age of the individual, and because these health disorders can also be a result of many different contributory causes, few would realize how weight gain during COVID-19 lockdown might have added to the risk.[4]

DELAYED RISKS TO MENTAL HEALTH

COVID-19 and the associated lockdown may have effects that are associated with delayed risks to mental health, as well. The effects of stress on mental health have been recognized by medical professionals for at least a century. The cumulative effects of stress, as exemplified by life event research, have been recognized for at least half a century. These effects of stress bear on major and minor mental illnesses as well as on psychosomatic disorders. The effects can be delayed; that is, the risks of mental illness may remain elevated for years, and even decades after the stress has passed.[5] This implies that there is an imprinting of vulnerability into neuronal circuits. A classical example of imprinting of vulnerability is that of the association between childhood physical and sexual abuse and the risk of mental illness in later childhood and adolescence[6] and in adult life,[7] with regard to depression, this risk may be greater than and independent of the risk that is associated with a polygenic risk score.[8]

The implication of such findings in the field of stress research is that the inescapable stresses and the adaptative demands associated with the COVID-19 pandemic and the lockdown may result in a surge of new cases of major and minor mental illness in the coming months and also in the
coming years. It goes without saying that there is a risk of worsening or relapse in persons with existing mental illness. The stress can also tip vulnerable persons into alcohol and illicit substance abuse.

As a side note, many patients with existing mental illness may be unable to obtain their medicines during the lockdown; this is especially true among those in poorer segments of society who depend on the free medicines dispensed by hospitals that are now closed. Patients who are unable to continue their medicines are at high risk of relapse.

Finally, patients who are suspected or confirmed to have COVID-19 and who are quarantined or isolated, those who require intensive care, and especially those who require ventilatory support, are likely to be in fear of death. These patients could be at high risk of developing posttraumatic stress disorder (PTSD).

PREGNANCY AS A SPECIAL FIELD OF CONCERN

Some but not all viral infections during pregnancy have been associated with adverse pregnancy outcomes. An infection during early pregnancy may cause anything from spontaneous abortion to a major congenital malformation. Viral infection during pregnancy can also increase the risk of neurodevelopmental disorders during childhood, and of schizophrenia in later life.

Coronavirus infection during pregnancy, specifically infection that is associated with pneumonia, has been associated with preterm birth, miscarriage, preeclampsia, cesarean section, and perinatal death. We do not as yet know whether the SARS-CoV-2 virus crosses the placental barrier and whether it can affect pregnancy as some viruses do. However, the possibility of vertical transmission of the disease has already been mooted.

HOW LARGE ARE THE RISKS?

Readers may reasonably ask how large these risks are. Extrapolations from previous research suggest that the risk of PTSD may be as high as 20% in the months after discharge from the intensive care unit (ICU), the more stressful the events in the ICU, the higher the risk. At the other extreme, there are probably only a few percentage points increase in the absolute risk of medical complications in later years or of neurodevelopmental complications related to pregnancy exposure to the disease, years to decades ahead. That is, at an individual level, the risks are low. However, at a population level, this risk is large. What does this mean?

COVID-19 is associated with death in about 2%–5% of cases. This means that an infected individual has a substantial chance of survival. However, at a population level, a 2%–5% mortality rate is unacceptably high because it means that a large number of people will die. Similarly, a few percentage points increase in delayed-onset medical or psychiatric illness is of considerable concern for public health, and the health-care system will need to be prepared for it.

OTHER NOTES

Lockdown would have altered accessibility to alcohol and other substances of abuse and increased viewing of movies and pornography, online. There could be changes in the patterns and prevalence of alcohol and substance use disorders, and of internet and pornography addiction, in the year ahead. If lockdown and forced proximity in the household trigger high levels of interpersonal friction, divorce rates may increase.

COVID-19 VERSUS NONCOMMUNICABLE DISEASES

The India State-Level Disease Burden Initiative Malnutrition Collaborators studied the disease burden attributable to the child and maternal malnutrition using all accessible data from different sources. This effort was part of the Global Burden of Diseases, Injuries, and Risk Factors Study (GBD) 2017. There were some striking findings in the study:

1. In India, during 2017, there were 1.04 million deaths in children aged <5 years. Of these, 706,000 deaths could be attributed to malnutrition. This averages to 1934 malnutrition deaths/day.
2. In India, during 2017, 32.7% of children were underweight and 59.7% had anemia.
3. In India, in 2017, 54.4% of women aged 15–49 years had anemia.

As of April 22, 2020, only about 600 deaths from COVID-19 have been reported in India. Perhaps India has more important health priorities than COVID-19, the solutions for which are less drastic than lockdown. Given that the national response to save lives from complications related to COVID-19 has come at a great economic cost, one hopes that when the COVID-19 pandemic ends, there will be comparable motivation to save lives from complications related to noncommunicable diseases.

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