Delayed care-seeking for non-COVID illnesses in Rhode Island

LUKE MESSAC, MD, PhD; ANITA KNOPOV, MD; MEREDITH HORTON, MD

In April 2020, emergency department physicians at Rhode Island Hospital and The Miriam Hospital noted unusually delayed presentations of acute illnesses. Below are three such cases:

> A 41-year-old male with insulin-dependent diabetes presented with three weeks of severe, constant lower abdominal pain with associated chills, with an exam notable for generalized abdominal tenderness and tachycardia. A CT demonstrated perforated appendicitis complicated by a large abdominal wall abscess, which required VIR placement of a drain and prolonged hospitalization.
>
> A 75 year-old male with a history of coronary artery disease presented with one month of progressive urinary hesitancy, progressing to anuria three days prior to presentation. When asked why he waited so long to present, he said he wanted to avoid the hospital for fear of contracting COVID-19. His laboratory studies were notable for a creatinine of 10 (increased from a baseline of 0.8). CT demonstrated bilateral hydroureteronephrosis and a distended bladder, likely due to prostatic enlargement. A Foley catheter was placed, and the patient admitted, with subsequent improvement in kidney function.
>
> A 55-year-old male with a history of hypertension, hyperlipidemia and diabetes presented to the emergency department with intermittent substernal chest pain for the past nine days, with associated left arm discomfort and diaphoresis. The episodes of chest pain occurred daily, lasting approximately one hour, and were not uniformly associated with meals or exertion. When he finally presented to an urgent care just prior to transfer to the emergency department, the ECG revealed an anterolateral STEMI. Cardiac catheterization revealed two-vessel coronary artery disease, and the patient underwent angioplasty and stenting of the left anterior descending and left circumflex arteries.

Delayed presentations of serious illness are not uncommon in normal times, and these are case reports rather than cohort analyses. However, the relative frequency of such cases over the first few weeks of community spread of COVID-19 in Rhode Island is in line with a worrying trend emerging throughout the United States and Europe. An analysis in the *Journal of the American College of Cardiology* compared STEMI activations at 9 high-volume cardiac catheterization laboratories in the United States in the two months prior to March 1, 2020 (before large-scale outbreaks of COVID in much of the United States) with the month following this date. The analysis showed a 38 percent reduction in monthly STEMI activations.[1] Similar declines were noted in multi-center analyses in Spain (40 percent decline in STEMI activations)[2] and Austria (39.4 percent reduction in admissions for acute coronary syndrome).[3] Stroke centers across the United States have reported declines in patient presentations and admissions.[4]

More generally, emergency departments have seen precipitous declines in patient attendances. This, too, is both a local and international phenomenon. Between early March and early April 2020, daily emergency department attendances across Lifespan hospitals (Newport, Hasbro, The Miriam, and Rhode Island Hospital) fell by approximately 50 percent. Meanwhile, in England, NHS accident and emergency attendance fell 30 percent during March.[5]

The reasons for this decrease in patient presentations in emergency departments have been the focus of preliminary speculation among physicians and public health professionals. Some of the decrease is attributable to decreased pathology. For instance, one logical effect of social distancing measures and massive business closures is a decrease in motor vehicle collisions, a major cause of traumatic injury. However, while social and behavioral changes may play a role in the decline in patients with stroke and MI, there are almost certainly many patients who, like the three patients above, are staying home for days despite worrying symptoms. Some patients admit that they feared coming to the hospital because they worried they might contract COVID-19. Indeed, a Gallup poll conducted between March 28 and April 2 found that among people with heart disease, 86 percent of respondents said they would be "very concerned" or "moderately concerned" about exposure to the coronavirus if they needed urgent medical treatment.[6]

It is also possible that patients might delay their own presentations for more altruistic reasons; namely, that they do not wish to further burden a health-care system that they fear

is struggling to deal with COVID-19 patients. Another possible explanation is that massive unemployment and the accompanying loss of health insurance is discouraging patients from seeking care for fear of hospital bills. However, given that similar decreases in patient presentations have been seen in countries with universal health insurance, this is less likely to be the most important cause.

Hospitals in Rhode Island, as well as across the country, have used the media to stress the safety of their facilities, and the need to seek medical attention for worrisome symptoms, such as chest pain or new weakness. Each of the three patients described above survived their delayed presentations, but other patients have not been so fortunate. Across the United States, epidemiologists have estimated tens of thousands of excess deaths since the start of the COVID-19 pandemic.[7] While a large portion of these deaths may be attributable directly to the novel coronavirus itself, at least some are likely casualties of this phenomenon of patients with serious illness remaining at home. While we encourage the general public to practice social distancing and stay at home, we must also ensure that they know that our emergency departments remain ready to provide care to all who are sick in our community, whether they are affected by COVID-19 or not. ❖

References

1. Garcia S, Albaghdadi M, Meraj P et al. Reduction in ST-Segment Elevation Cardiac Catheterization Laboratory Activations in the United States during COVID-19 Pandemic. JACC. 2020 (journal pre-proof).
2. Rodríguez-Leor O, Cid-Álvarez B, Ojeda S, et al. Impacto de la pandemia de COVID-19 sobre la actividad asistencial en cardiología intervencionista en España. Rev Española de Cardiología 2020 (available online)
3. Metzler B, Siostrzonek, Binder R et al. Decline of acute coronary syndrome admissions in Austria since the outbreak of COVID-19: the pandemic response causes cardiac collateral damage. European Heart Journal 2020 (available online)
4. Bernstein L and Stead Sellers F. Patients with heart attacks, strokes and even appendicitis vanish from hospitals, Washington Post, April 19, 2020.
5. Neville S, Bounds A, Dickie M et al. Empty non-coronavirus beds raise fears that sickest are avoiding NHS. Financial Times, April 10, 2020.
6. Saad L. Americans worry doctor visits raise COVID-19 risk. Gallup, April 6, 2020.
7. Reinhard B. US deaths soared in early weeks of pandemic, far exceeding number attributed to COVID-19. Washington Post, April 27, 2020.

Authors

Luke Messac, MD, PhD, emergency medicine resident at Brown University.

Anita Knopov, MD, emergency medicine resident at Brown University.

Meredith Horton, MD, emergency medicine resident at Brown University.

Correspondence

Luke Messac, MD, PhD

lukemessac@gmail.com