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Commentary

Delivery of care remotely through telemedicine in celiac disease: Thinking beyond COVID-19



M. Ines Pinto-Sanchez^{a,*}, Benjamin Lebwohl^b

^aFarncombe Family Digestive health Institute, McMaster University, Canada

^bColumbia University, New York, US

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The COVID-19 pandemic has had an immeasurably negative health and economic impact on the world. Since the first reported cluster of pneumonia in China in December 2019, as of May 2020 the virus has infected over 4000,000 people, with over 285,000 deaths worldwide [1]. In response, governments have enacted major social restriction measures to prevent the dissemination of the virus, including lockdowns of cities, provinces and even the whole countries. This disruption has created downstream effects on society and generated major changes in the way that health care is delivered.

In addition to the direct morbidity and mortality due to SARS-CoV-2, it is likely that the imposed measures to control disease spread create significant fear and anxiety due to uncertainty regarding the severity and duration of this pandemic. This has led to stockpiling of food and other essentials, leading to shortages.

The pandemic has generated additional unique concerns in the community of people with celiac disease, an immune-mediated condition for which the only proven treatment is adhering to a gluten-free diet [2]. Celiac disease has been associated with an increased risk of bacterial pneumonia [3] and common viral infections including influenza [4] and herpes zoster [5]. These reports have led to concern regarding whether celiac patients are at increased risk of becoming infected with and developing severe complications from COVID-19. The pandemic may also theoretically affect people at genetic risk for developing celiac disease, as viral infections have also been reported to trigger immune reaction to dietary antigens [6].

Beyond these speculative risks, people with celiac disease are facing immediate concerns including the possibility of reduced access to gluten-free substitute foods, and to health care. This latter

issue has led to the rapid advent of telemedicine as the primary tool of outpatient assessment. The use of telemedicine is promising, and may be especially useful in the monitoring and follow up of celiac disease patients, given the relative dearth of specialized expertise in celiac disease, particularly with regard to expert dietitians. Though telemedicine has long held promise in the management of celiac disease, it has taken a global pandemic to prompt mass implementation of this technology.

In this issue, Siniscalchi, et al. [7] report on the response to a questionnaire regarding COVID-19 distributed to patients with celiac disease at two university-based centers in Italy, the first country in Europe to impose a nation-wide lockdown due to widespread illness related to COVID-19. The study found that the majority of respondents did not report feeling more vulnerable to COVID-19 due to their celiac disease, and a majority was not worried about shortages of gluten-free food, but significant proportions reported feeling depressed and threatened in general due to celiac disease (as components of a disease-specific quality of life questionnaire). Older respondents were more likely to be worried about their celiac disease posing an increased risk both of contracting the infection and having severe complications related to celiac disease. Respondents also found that telemedicine was popular among this population, with less than 20% expressing a concern about not being followed as closely as usual.

The results of this survey provide useful information on the perception of patients with celiac disease related to this pandemic. Traveling and eating out are central issues of concern in people with celiac disease long before the pandemic, given the increased possibility of inadvertent gluten exposure in those settings. As both of these practices have been disrupted, it will be important to determine how this affects quality of life and disease activity. This is not the first time that world calamity has uniquely affected people with celiac disease. During the Dutch Famine of 1944–45 resulting from Nazi blockade, the scarcity of wheat products produced

* Corresponding author.

E-mail address: pintosm@mcmaster.ca (M. Ines Pinto-Sanchez).

large-scale starvation in the general population, but a paradoxical improvement of children with celiac disease who were now deprived of gluten, as the gluten-free diet had not yet been a widely accepted treatment [8]. This dark episode reminds us that environmental conditions interact with different host populations in sometimes-unpredictable ways.

It is notable that nearly a third of respondents in the questionnaire study answered “maybe” to the question about celiac disease posing a higher risk of COVID-19 complications. This risk is unknown at present, and this is a sizable number indicating that this is a “maybe” risk, which may be a source of anxiety. This unknown risk is a concern that needs to be studied, and hence the need for a registry to study outcomes in this population. A new initiative, *Surveillance Epidemiology of Coronavirus Under Research Exclusion (SECURE-Celiac)* [9], was developed with this aim, and is currently open to registry entry, with updated aggregate data reported at www.covidceliac.org.

The study by Siniscalchi, et al. [7] provides the first data on pandemic perception of COVID-19 in the celiac disease community; however, it is unknown whether the results can be extrapolated to other countries. Therefore, efforts to investigate the effect of COVID-19 in the international celiac disease community should be undertaken, so as to understand the full implications of the intersection of these two conditions.

Declaration of Competing Interest

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