Coronavirus and Dermatology: A Resident's Perspective

Sophie A. Greenberg, MD

On January 30, 2020, the World Health Organization declared the outbreak of coronavirus disease 2019 (COVID-19) a public health emergency of international concern.[1] Severe acute respiratory syndrome–associated coronavirus 2 (SARS-CoV-2), the virus that causes COVID-19, is an enveloped, single-stranded RNA virus. It is the seventh known coronavirus to infect humans and third zoonotic *Coronaviridae* to cause fatal respiratory illness, along with SARS-CoV and Middle East respiratory syndrome coronavirus (MERS-CoV).[2] There has been a rapid shift in the geographic center of the outbreak as well as the numbers of confirmed cases and deaths. Although the first cases in late 2019 and early 2020 were in China, by mid-March Italy became the center of the pandemic, with a steep increase in the number of cases in other European countries and the United States.[3] Although COVID-19 does not have known dermatologic manifestations, it has the potential for wide-reaching impact on our field.

Strained Resources

In the United States, COVID-19 initially was associated with international travel but is now rapidly spreading throughout the community. I am currently a dermatology resident at New York-Presbyterian, Columbia campus, in New York, New York, a city that unfortunately finds itself underprepared to handle this unprecedented crisis. As of Monday, March 16, 2020, New York-Presbyterian made the decision to postpone all elective procedures, including Mohs micrographic surgery, to preserve hospital resources, including trained personnel, personal protective equipment, ventilators, and hospital beds. There have not been clear-cut guidelines regarding how to approach other dermatologic care for our patients, including routine clinic visits and inpatient dermatology consultations, leaving decisions up to individual departments and providers.

It would be prudent to learn from our colleagues in China who report steps that have been successful in preventing nosocomial spread of COVID-19 in the dermatologic setting. Tao et al[4] described their protocols in both the outpatient and inpatient dermatologic setting, beginning with strict triage before patients can even enter a clinic building for their outpatient appointment. Those who screen positive are sent to a fever clinic for further evaluation, which may include a rapid computed tomography scan (using a machine that may perform 200 chest computed tomography scans per day) and SARS-CoV-2 polymerase chain reaction.[5] For inpatient dermatologic consultation of patients with known COVID-19, telehealth and multidisciplinary meetings are first and second line, respectively, with bedside dermatologic consultation as a last resort.[4] Chen et al[6] described similarly strict triage protocols as well as physician use of full-body personal protective equipment during all patient encounters. These measures are taken in light of the well-documented phenomenon of asymptomatic carriage and transmission, as all patients entering their dermatologic clinics have screened negative for symptomatic SARS-CoV-2 infection.[6]

Conferences and Education

Coronavirus is impacting the education of millions of individuals worldwide, including that of dermatology residents. The Annual Meeting of the American Academy of Dermatology, which was scheduled to take place in March 2020, was canceled due to COVID-19.[7] The American Board of Dermatology has released a statement indicating that for all dermatology residents, time spent in COVID-19–mandated quarantine will count as clinical education if residents are able to work with their program to complete independent structured academic activity during that time.[8] We also must consider the possibility that dermatology residents are reassigned to work outside of our specialty, resulting in less time and experience caring for patients with dermatologic conditions. Dermatologists in other countries have been called upon to care for COVID-19 patients, even reported to be working in intensive care units in Italy.[9] Virtual technologies may be used in novel ways to support dermatology resident education throughout this process.

From the Department of Dermatology, Columbia University Medical Center, New York, New York.
The author reports no conflict of interest.
Correspondence: Sophie A. Greenberg, MD, 161 Fort Washington Ave, 12th Floor, New York, NY 10032 (sag2203@cumc.columbia.edu).

Final Thoughts

As physicians, dermatologists are in the position to educate their patients regarding prevention strategies, especially given that the lay press disseminates confusing and inaccurate information. The World Health Organization provides specific guidance, focusing on handwashing, respiratory hygiene, social distancing, and encouraging symptomatic patients to seek remote care whenever possible.[10] Many of our patients are at high risk of complications due to COVID-19, whether due to their age or because they are immunocompromised. As the situation unfolds, the impact on and role of dermatology in this crisis will continue to evolve.

REFERENCES

1. Statement on the second meeting of the International Health Regulations (2005) Emergency Committee regarding the outbreak of novel coronavirus (2019-nCoV)[news release]. Geneva, Switzerland: World Health Organization; January 30, 2020. https://www.who.int/news-room/detail/30-01-2020-statement-on-the-second-meeting-of-the-international-health-regulations-%282005%29-emergency-committee-regarding-the-outbreak-of-novel-coronavirus-%282019-ncov%29. Accessed March 16, 2020.
2. Zhou P, Yang XL, Wang XG, et al. A pneumonia outbreak associated with a new coronavirus of probable bat origin. *Nature.* 2020;579:270-273.
3. World Health Organization. Coronavirus disease 2019: Situation Report—58. March 18, 2020. https://www.who.int/docs/default-source/coronaviruse/situation-reports/20200318-sitrep-58-covid-19.pdf?sfvrsn=20876712_2. Accessed March 19, 2020.
4. Tao J, Song Z, Yang L, et al. Emergency management for preventing and controlling nosocomial infection of 2019 novel coronavirus: implications for the dermatology department [published online March 5, 2020]. *Br J Dermatol.* doi:10.1111/bjd.19011.
5. McNeil DG. Jr. Inside China's all out war on the coronavirus. *The New York Times.* March 4, 2020. https://www.nytimes.com/2020/03/04/health/coronavirus-china-aylward.html?smid=tw-nytimes&smtyp=cur. Accessed March 19, 2020.
6. Chen Y, Pradhan S, Xue S. What are we doing in the dermatology outpatient department amidst the raging of the 2019 novel coronavirus? *J Am Acad Dermatol.* 2020;82:1034.
7. Hruza GJ. 2020 annual AAD meeting is canceled due to COVID-19 outbreak. American Academy of Dermatology website. https://www.aad.org/member/meetings/am2020/faqs/coronavirus. Accessed March 16, 2020.
8. American Board of Dermatology. Impact of COVID-19 on dermatology resident education. March 6, 2020. https://www.abderm.org/2978.aspx. Accessed March 16, 2020.
9. "It's Like a War" [podcast]. *The Daily.* March 17, 2020. https://www.nytimes.com/2020/03/17/podcasts/the-daily/italy-coronavirus.html?action=click&module=audio-series-bar&region=header&pgtype=Article. Accessed March 20, 2020.
10. World Health Organization. Coronavirus disease (COVID-19) advice for public. March 18, 2020. https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public. Accessed March 19, 2020.