Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Clinics in Dermatology (2021) **39**, 521–522

Clinics in Dermatology

COVID-19: Important Updates and Developments
Edited by Franco Rongioletti, MD and Leonard J. Hoenig, MD

Management of laser treatments during the coronavirus disease 2019 pandemic: The Italian experience

Luigi Bennardo, MD[a], Ester Del Duca, MD[a], Annunziata Dattola, MD[b], Giovanni Cannarozzo, MD[b], Steven Paul Nistico, MD[a,*]

[a] *Dermatological Unit of "Magna Graecia" University, Catanzaro, Italy*
[b] *Department of Dermatology, University of Rome "Tor Vergata," Rome, Italy*

To the Editor: The coronavirus disease 2019 (COVID-19) pandemic has forced changes in infection control protocols when using lasers and other light-based energy devices to reduce the risk of spreading viral particles occurring during these procedures. To our knowledge, no guidelines have been published for the management of laser surgery during the COVID-19 pandemic, although there are a few papers addressing laser safety.[1-3] We wish to share the protocols we have developed for preventing the spread of infection at the Laser Unit of the University of Catanzaro, Italy.

Background

We have treated more than 350 patients from March through December 2020. Our unit has spread treatment appointments so that the waiting room is never crowded, thus reducing the number of sessions we can accommodate. Patients, like staff, are required to wear masks, and two-meter social distancing is strictly enforced.

Each patient is given a questionnaire to determine whether there had been any possible contact with people who may be COVID-19–positive. A thermal scan is then performed so that patients with a temperature >37.5C° are sent home, as well as any patient who had direct contact in the past 14 days with someone afflicted with COVID-19. When we anticipate treating a patient, we request a rapid COVID-19 test 2 days before treatment.

As severe acute respiratory syndrome coronavirus 2 can persist on inanimate surfaces from a few hours up to 9 days[4,5] and is efficiently inactivated within 1 minute by surface disinfection procedures with 70% ethanol and 0.1% sodium hypochlorite or 0.5% hydrogen peroxide, working areas and laser handpieces are sanitized after each session. All materials coming in contact with the patient, such as examining table covers, head covers, or gowns, are disposable and immediately discarded after use.

Patients are asked to wash their hands before treatment and apply an alcohol-based disinfectant. All medical personnel wear disposable gloves and protective glasses in addition to using N99 or FFP3 protective masks.

All laser procedures, ablative and nonablative, can generate plumes and aerosols which include both combustion and noncombustion-generated products, tissue debris, and aerosolized biologic materials. Prior studies have shown transmission of viruses and bacteria via plume (ie, HIV and papillomavirus).[6] For this reason, laser procedures should be performed with a high-performance smoke aspirator near the device to generate little to no plume.[7] The British Medical Laser Association also recommends that health care workers wear a particulate respirator at least as protective as an N95 or FFP2 and a face shield when performing aerosol-generating procedures.[1]

The treatment room should be ventilated to disperse any possible residual viral particles remaining in the air.

* Corresponding author.
E-mail address: nistico@unicz.it (S.P. Nistico).

https://doi.org/10.1016/j.clindermatol.2021.01.004

Procedures such as treatment of acne scars, melasma, or facial seborrheic keratoses should be delayed, if possible. When delay is not possible, all procedures should be performed with an N99 or FFP3 protective mask.

Conclusions

Although no guidelines are currently present in the literature, we suggest reducing the number of energy-based treatments during the COVID-19 pandemic to prevent disease spread. We strongly suggest following disease control protocols that we have described herein. Future studies regarding viability and transmissibility of COVID-19 in plume specimens could be useful to reduce transmission during laser treatments.

References

1. Madan V. Resumption of laser/IPL skin services post COVID-19 lockdown-British Medical Laser Association (BMLA) guidance document. *Lasers Med Sci*. 2020;35:2069–2073.
2. Elsaie M, Nada H. Insights into laser safety considerations during COVID 19 pandemic. *Dermatol Ther*. 2020;33:e13777.
3. Sullivan J, Rademaker M, Goodman G, et al. Guidance on infection control and plume management with laser and energy-based devices taking into consideration COVID-19. *Australas J Dermatol*. 2021;62:37–40.
4. Kampf G, Todt D, Pfaender S, Steonmann E. Persistence of coronaviruses on inanimate surfaces and their inactivation with biocidal agents. *J Hosp Infect*. 2020;104:246–251.
5. Maeques M, Domingo J. Contamination of inert surfaces by SARS–CoV-2: persistence, stability and infectivity. A review. *Environ Res*. 2021;193.
6. Searle T, Ali FR, Al-Niaimi F. Surgical plume in dermatology: an insidious and often overlooked hazard. *Clin Exp Dermatol*. 2020;45:841–847.
7. Wagner JA, Bodendorf MO, Grunewald S, Simon JC, Paasch U. Circular directed suction technique for ablative laser treatments. *Dermatol Surg*. 2013;39:1184–1189.