Safer Practice of Aesthetic Dermatology during the COVID-19 Pandemic: Recommendations by SIG Aesthetics (IADVL Academy)

Abstract

The COVID-19 pandemic caused by the SARS-CoV-2 virus, has changed the homeostasis of the medical world. In this critical phase, in addition to the general recommendations issued by World Health Organization (WHO) for medical practitioners and health care givers, certain other precautions and safe care practices need to be emphasized which are unique to each branch of medicine. Aesthetic dermatology is no exception. With aesthetic treatments on the rise, it is pertinent to formulate safe practices for aesthetic dermatology to protect the doctor, health staff and the patients from getting exposed during this phase and in the aftermath of the pandemic. Recommendations for surgical and dental procedures advice to defer such procedures. This can be extrapolated to aesthetic dermatology also, but once health care services start, there should be some safety recommendations to be followed until we have definitive management or a vaccine for it.

Keywords: *Aesthetic dermatology, COVID-19, recommendations, teledermatology*

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Introduction

Aesthetic dermatology is now an inherent branch of dermatology, sought for by a number of patients, and is steadily on the rise with most dermatologists performing these procedures. With an array of minimally invasive procedures with minimal downtime, more people are opting for these with a reported increase of 17% year on year and a 36-58% increase in botulinum toxin and dermal fillers over the past few years.[1-3] Increasing financial capability, professional demand and a desire to maintain youthfulness drive the demand for these procedures sometime to unrealistic expectations.[4,5]

In any pandemic or worldwide disaster, the need to feel good is inherent to a healthy mental-well-being.[6] Wishing away the need for an aesthetic practice is thus inherently weak in its argument as individuals shall definitely seek their dermatologist for their maintenance or first time procedures. Dermatologists are thus uniquely placed in counselling and managing such cases.[7]

In this COVID-19 outbreak, although the general-safe practice recommendations for health workers are already in place,[8,9] there is an urgent need for additional ones to practice aesthetic dermatology safely to further aid in reducing transmission of this infection.

Scope and Rationale

These therapeutic recommendations have been framed as per the felt need of the members of the Indian Association of Dermatologists Venereologists and Leprologists (IADVL). The objective of recommendations were to frame minimum standards of care which can be followed by IADVL members and other aesthetic dermatologists in their daily aesthetic practice during the COVID-19 pandemic. These recommendations have been framed by the Special Interest Group on Aesthetics under the aegis of IADVL Academy by the authors who regularly perform aesthetic dermatology procedures.

Selection of Patients

The single most important criterion for patient safety would be for a dermatologist to choose their patient wisely. Elderly patients, those with co-morbidities or on polypharmacy, should be triaged and the

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risk-benefit ratio of performing a procedure should be assessed. This would also depend on the nature of treatment being performed. These treatments are best classified based on their invasiveness [Table 1].[10] Surface treatments like superficial or mid-depth chemical peels would be safer to perform than microneedling or a resurfacing treatment that are classified as non-invasive.[10] Microdermabrasion although considered non-invasive has risk of aerosolization and hence has been classified as minimally invasive. Ablation possibly renders the patient and the health care staff more prone to infection. These procedures shall also need repeated visits to the facility for follow-up and are best delayed. It is thus best to select cases which need minimum number of sessions. Any procedure with possibility of aerosolization and ablation should be classified as invasive.

Counselling and Consent

Patient must be communicated in a language they understand initially on tele-consultation and later as a written consent about the theoretical risks of acquiring the infection on their visit on exposure to the environs of the health care facility, other patients while awaiting their turn and chances of acquiring the virus due to the nature and invasiveness of the procedure. The post-procedure care may involve medications such as azithromycin which may potentially interact with those needed for COVID-19 prophylaxis or treatment, and hence the treating dermatologist must be made aware of all medications they are on. If required, they may even need to come back for a follow-up. Hence, issues regarding continuation of care must be discussed. Patients already on treatment before the pandemic may need to be followed by video tele-consultation,[11-13] those whose treatment is being initiated in present circumstances may need to visit as per the procedure they have undergone. Special counselling with respect to side effects needs further emphasis as follow-ups shall be scheduled by appointments.

A mutual trust between the dermatologist and the patient should be established, respecting patient autonomy in

Table 1: *Aesthetic-procedure classification in COVID-19 pandemic[10]

Procedure invasiveness	Procedure	Precautions
Non-invasive	Chemical peels superficial	Basic caution
	Electroporation	Basic protection
	Lasers non ablative/non plume generating	
	Light emitting diodes	
	Low level laser therapy	
	Intense pulsed light	
	Cryolipolysis/laser lipolysis/radiofrequency lipolysis/high frequency ultrasound	
Minimally-invasive	Botulinum toxin injection	Advanced caution
	Filler injection	Moderate protection
	Skin boosters	Additional protective equipment
	Injection lipolysis	
	Mesotherapy	
	Microneedling	
	Sclerotherapy	
	Microblading	
	Thread lifts	
	Medium depth peels	
	Microdermabrasion	
	Hair removal lasers	
	Radiofrequency procedures	
	Carboxytherapy	
Invasive	Regenerative aesthetic medicine procedures	Extreme caution
	Platelet rich plasma, Platelet rich fibrin	Advanced protection
	Free fat grafting	Additional protective equipment
	Liposuction	
	Hair transplantation	
	Chemical peels - deep	
	Lasers (skin resurfacing and carbon peel)	
	Dermabrasion (mechanical)	

*Adapted from Ministry of Health Singapore guidelines on aesthetic practices for doctors

taking a decision and non-maleficence.[5,14] Apart from the above, informed consent that is taken for an elective dermatological aesthetic procedure,[15] the authors propose to have a self-declaration form attesting that the patient has had no recent travel history to a hot spot or exposure to a COVID-19 positive patient.

Disclaimer

There is no need to panic. The health care workers and patients need to be calm and practice caution. There is no absolute contraindication except a COVID-19 positive patient, or one in quarantine, to performing any aesthetic dermatologic procedure, but special scenarios involving the patient medical history, health of the doctor and health care staff and clinic/healthcare environment need to be kept in mind while adopting universal precautions.

The dermatologist may be dealing with only a few aesthetic dermatological procedures, but the safety recommendations have to be tailored to every patient and medical scenario. Since all these procedures are elective, any doubt should lead to a deferment of the procedure.[16]

General Recommendations

General principles of asepsis and universal precautions apply to all cases. The aesthetic setup must adhere to guidelines issued by World Health Organization (WHO) for Infection prevention and control during health care when COVID-19 is suspected.[9] In addition, the sanitization and care of the facility and its biomedical waste management must be done as per Ministry of Health and Family Welfare and Central Pollution Control Board guidelines.[17-19] The setup must have patient education material on COVID-19 displayed on the walls. Use of hand-outs and pamphlets is discouraged to prevent fomite transmission.

1. All individuals reporting for treatment with or without a history of fever or sore throat must be assumed positives, as some may be asymptomatic.
2. All instruments and equipment used should be thoroughly sanitized[20] and substituted with disposables wherever possible.
3. No matter how short or non-invasive the procedure, as there is a close proximity between the treatment provider and patient, adequate personal protection [Table 2] is a must. Basic protection correlates to non-invasive procedures with minimal risk, moderate protection for procedures which are minimally invasive and carry a moderate risk and advanced protection is advised for invasive procedures with high risk of SARS-Cov-2 transmission.[21]
4. Invasive procedures on immunosuppressed and those on immunosuppressive therapy should be avoided.[22] Patients on isotretinoin need to be counselled as cheilitis and skin dryness may make them touch their face more often. Even though isotretinoin is being investigated as a possible treatment for COVID-19,[23] its use in all aesthetic cases must be re-evaluated as it compromises mucociliary clearance.[24]
5. Hydroxychloroquine with its safe toxicity profile is usually considered safe in perioperative periods in rheumatoid arthritis patients. If an individual is on regular dosing with hydroxychloroquine or on COVID-19 prophylaxis, the procedure can safely be conducted.[25,26]
6. The treatment area should have good ventilation. Negative pressure operating areas are recommended however these are better suited for surgical centres.[9] Authors recommend use of smoke evacuators as a routine, close to the procedure area. It should be ensured the smoke evacuators have a triple filter and conform to the recommendations.[27]
7. The treatment administrator/healthcare staff should be adequately protected. Advice all patients to walk in with cloth masks/triple layer masks. If the walk-in patient does not have a mask, a triple layer mask must be provided at the reception.
8. The aesthetic health setup is classified as a low/medium risk area.[21] It is not expected to deal with a patient suffering with COVID-19. The reception staff must wear a triple layer mask with gloves while treatment administrators/dermatologists in closer proximity to patients all need to wear gloves and N-95 respirator masks.[20,21] These protective measures are based on weather only consultation is being provided or it is an elective procedure. [Tables 1 and 2]
9. While in the waiting area, ensure the patients are distanced or issued appointments to prevent overcrowding. Patient masks must be removed only if the face is being treated after moving in to the treatment room.[28]
10. For non-facial treatments, the face mask must be worn and patients face must be turned away from the treatment administrator.
11. Minimize movement of personnel in and out of the treatment area.

Table 2: Recommended protection for aesthetic procedures[21]

Protection level	Recommended protection
Basic protection	N95 respirator mask Latex/Nitrile gloves
Moderate protection	Goggles N95 respirator mask Latex/Nitrile gloves Gown
Advanced protection	Goggles Face-shield N95 respirator mask Gloves Coverall/gowns (with or without aprons) Head cover Shoe cover

12. Follow ups should be scheduled after at least two week intervals. All treated cases must be tele-consulted in the follow-up period, especially to enquire about COVID-19 symptoms.

Specific Recommendations

Special attention may be needed for different procedures [Table 2]. It is best to adhere to standard operating procedures rather than deviate from them. Non-invasive and minimally invasive procedures may be conducted with adequate precautions. Authors recommend deferring the invasive procedures. Routine COVID-19 testing prior to procedures is not mandatory as per Indian Council of Medical Research guidelines.[29]

Injectables (Fillers, Toxin, Threads)

1. A double pair of gloves should be worn by the doctor and healthcare staff.[20]
2. The areas to be injected should be disinfected thoroughly.
3. Procedures around nose and perioral area must be deferred. Once these procedures are restarted adequate protection must be adopted. Use of povidone iodine to coat oral and nasal mucosa is recommended as it has shown to be viricidal to SARS-CoV-2 for a period of 3 hours.[30-32]
4. Disposal of syringes and needles using a needle destroyer should be done immediately post-procedure.
5. Steri-strips™ or suitable skin dressing to be used post procedure to seal entry ports made for cannula insertion for 48 hours followed by an antibiotic cream for another two days. Medical plasters available as an over the counter product may be used if the skin dressing comes off within first two days.

Blood and Blood Product Treatments (Platelet rich plasma, Platelet rich factor, Growth factor concentrate)

1. Are best avoided and deferred to a time when the risk from the virus is no longer an issue (according to state recommendations/guidelines). This treatment can be swapped for mesotherapy using hair growth concentrates.
2. If absolutely sure or using alternative treatments, follow the recommendations for injectables.

Microneedling

1. Abraded skin can theoretically lead to a route of virus entry.
2. It is advisable to use manual, disposable dermarollers for each sitting.
3. If using a motorized device, the cartridge should be discarded after a single use.
4. In case of using radiofrequency devices, the tip has to be well sterilized using glutaraldehyde.[33]
5. Post procedure skin barrier repair creams must be prescribed.

Chemical Peels

1. Very superficial, superficial and medium-depth peels can be performed.
2. The patient should be advised about good moisturization in the post-care instructions, as a dry skin post peel can lead to touching of the face more often and a theoretical possibility of introduction of the virus through abraded skin.
3. Post-procedure skin barrier repair creams can be prescribed.
4. Nail and body peels can be safely carried out.

Medical Facials

1. These should be discouraged if done for a 'feel good' factor, evening skin tone or glow as any non-emergent procedure on the face is best deferred. Home care products, either drugs or cosmeceuticals, should be prescribed in lieu.
2. Carbon facials are high plume generating procedures, hence they need extreme caution and should be deferred, even when they are restarted follow the 'invasive procedure' protection.

Microdermabrasion and Dermabrasion

1. Dermabrasion always required the treatment administrators to use personnel protection kit to prevent hepatitis and HIV transmission. These procedures now must be deferred and in the aftermath a complete COVID-19 PPE kit must be used compulsorily.
2. Microdermabrasion needs caution as it is potentially aerosol generating, while the skin is being dry-scrubbed.[34]

LASER and Energy-based Devices

1. Hazards of plume generated by hair removal lasers are well known and administering personnel need to be cautious.[35]
2. The probes should be thoroughly sanitized using alcohol swabs using 70% ethyl alcohol.
3. Extra care should be exercised while shaving hair before a LASER hair reduction, and if there is a cut, it should be cleaned and dressed immediately. Patients may be advised to photograph the area, shave and report for treatment. This shall reduce the time spent in the health care facility.[36]

Fat Grafting

1. Handling tissue is fraught with risk of transmission. Hyaluronic acid filler should be considered as a replacement.

Non-surgical Body Contouring

1. Use of cryolipolysis/laser lipolysis/radiofrequency lipolysis/high frequency ultrasound are safe. Injection lipolysis should follow recommendations laid down for injectables.

Electrosurgery and Radiofrequency

Electrosurgery hot probe procedures which generate plume such as electrofulguration, electrodessication, and electrocautery must be avoided.[37] If possible cold probe devices such as higher frequency – radiofrequency devices may be used for electrosectioning to avoid plume generation.[38] Radiofrequency procedures need moderate protection.

Miscellaneous Procedures

Microblading in hands of experts causes minimal bleeding and may be considered moderately invasive. However, if excessive bleeding is expected, a full complement of PPE should be used. Cosmetic tattooing and dermaplaning should be deferred. Electroporation can be safely carried out. Skin boosters are minimally invasive and considered safe. Low light laser therapy and use of light emitting diodes are also safe for use. All these procedures need minimal to nil pre-procedure and post-procedure care. Microblading in particular shall need safe sterile/ Tegaderm™ dressing overnight to ensure wound closure and a safer surgical site the next day.

Conclusion

Standard treatment protocols and recommendations for procedural dermatology as per the country/state need to be followed. These can be extrapolated to aesthetic dermatology. Any preparedness for this pandemic must factor into account human factors such as patient and employee education, best infection control practices. Even though it is tempting to lay down procedures and protocols to tide over the present scenario, it is imperative we build in safe practices taking into account the aftermath of the pandemic which presents us with the real and present danger in its aftermath – the resurgence of the pandemic.[39]

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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