

repigmentation in 66% of cases of refractory vitiligo.⁴ The number of sessions in our series seems adequate, as repigmentation was noted after a mean of ten sessions in one study.⁵ Three cases showed exacerbation, probably due to reversal of inhibition of immune response by halting whole-body narrowband ultraviolet B. Our study has limitations of being a retrospective one with a small sample size and a lack of control group. In conclusion, our preliminary study suggests that excimer light therapy is not effective for the treatment of residual vitiligo lesions following adequate whole-body narrowband ultraviolet B therapy. Surgical intervention followed by exposure to excimer light may be a better option for such recalcitrant lesions.

Declaration of patient consent

The patient's consent is not required as the patient's identity is not disclosed or compromised.

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Conflicts of interest

There are no conflicts of interest.

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Treatment practices amongst dermatologists in western India during the COVID-19 pandemic: A cross-sectional study

Sir,

India has the second highest number of COVID-19 cases after the United States of America. COVID-19 has affected the mode of consultation and prescription patterns in dermatology worldwide.^{1,2} The aim of the study was to study the prescription patterns and practices among dermatologists during COVID-19 pandemic. An online questionnaire was sent via email and WhatsApp groups to dermatologists working in Rajasthan between 28 September 2020 to 1 November 2020. A total of 76 participants responded after giving informed consent. Out of all the questions, there was no response to a few questions (range 1–3 questions), as shown in Tables 1-3. Majority of the dermatologists, 43 (56.6%) were working in educational institutes and government hospitals followed by private hospitals 20 (26.3%). Thirty-three (43.4%) of the total participants were attending more than 50 cases per day before COVID-19, while only 21 (27.6%) participants were attending more than 50 patients per day during the pandemic. In India,

telemedicine is not a commonly used mode of consultation, however due to the pandemic 39 (51.3%) dermatologists were using a telemedicine platform along with physical consultations. Dermatologists did not find telemedicine as a good mode of consultation every time. Thirty-one (40.8%) dermatologists found telemedicine consultation good in terms of diagnosis only sometimes (34–66% of time) [Table 1]. Specific reason for this was not asked from the participants but it may be related to poor quality images, mode used, need for systemic evaluation and a need for whole body examination.

COVID-19 can spread through asymptomatic individuals as well and therefore use of protective equipment is important. Forty-six (60.5%) dermatologists were using both mask and face shields, while 27 (35.5%) were using face mask alone during patient examination.

Majority i.e 50 (65.8%) dermatologists agreed that COVID-19 had affected their prescription pattern. Sixty-four

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Table 1: Effect of COVID-19 pandemic on dermatology

S. No.	Questions in survey with options	Options	No. of responses (n)	Percentage of responses (%)
1.	If you are a private practitioner, have you opened your clinic since the PM's lockdown announcement dated 23 March 2020?	a. I have opened the clinic for full time as before COVID-19	8	10.53
		b. I open the clinic for only few hours in comparison to pre COVID-19	22	28.95
		c. I have not opened the clinic till now	1	1.31
		d. I open the clinic only if I feel somebody needs physical consultation or for an emergency	6	7.89
		e. Not applicable	36	47.37
		f. No response	3	3.95
2.	Which type of consultation are you doing now?	a. Telemedicine consultation	0	0
		b. Physical consultation	26	34.21
		c. Both of the above	39	51.31
		d. I am not doing any consultation	10	13.16
		e. No response	1	1.31
3.	What was the average no. of patients seen by you per day just before the COVID-19 pandemic started?	a. 0-5	4	5.26
		b. 6-10	5	6.58
		c. 11-15	3	3.95
		d. 16-20	8	10.53
		e. 21-30	8	10.53
		f. 31-40	8	10.53
		g. 41-50	4	5.26
		h. >50	33	43.42
		i. No response	3	3.95
4.	What is the average number of patients being seen by you per day currently during COVID-19?	a. 0-5	9	11.84
		b. 6-10	6	7.89
		c. 11-15	10	13.16
		d. 16-20	8	10.53
		e. 21-30	4	5.26
		f. 31-40	7	9.21
		g. 41-50	9	11.84
		h. >50	21	27.63
		i. No response	1	1.31
		j. Not doing any consultation	1	1.31
		5.	How has the average time being spent by you per consultation changed as compared to the period before the COVID-19 pandemic?	a. Has increased now
b. Has remained the same	25			32.89
c. Has reduced	25			32.89
d. Not applicable as I not seeing any patients now	1			1.31
e. Not sure or difficult to say	4			5.26
f. No response	1			1.31
6.	Most of the patients seen by you belong to	a. Only Aesthetics	0	0
		b. Only Clinical dermatology routine cases	21	27.63
		c. Both aesthetics and clinical dermatology cases with aesthetics more than clinical	5	6.58
		d. Both aesthetics and clinical dermatology cases with clinical more than aesthetics	45	59.21
		e. Only emergency cases	3	3.95
		f. I am not seeing any patients.	1	1.31
		g. Others	0	0
		h. No response	1	1.31

(Contd...)

Table 1: (Continued)

S. No.	Questions in survey with options	Options	No. of responses (n)	Percentage of responses (%)
7.	What precautions are you taking while examining patients?	a. Wearing only mask and face shield	46	60.53
		b. Wearing only mask	27	35.53
		c. Examining patients in the same way as before COVID-19, that is, without any precautions	0	0
		d. I am not doing any consultation	1	1.31
		e. No response	2	2.63
8.	Are you doing aesthetic procedures like peels, LASER, dermatosurgery procedures etc., during the COVID-19 pandemic?	a. Yes, I am doing in new as well as follow up cases with proper infection prevention precautions	19	25
		b. I have completely stopped these procedures	28	36.84
		c. Yes, I am doing for my follow-up cases only with proper infection prevention precautions	13	15.12
		d. I was not doing these procedures earlier and even now	10	13.16
		e. Others	3	3.95
		f. No response	3	3.95
9.	Are you using biologicals currently during the COVID-19 pandemic?	a. Yes, I am using biologics, depending on risk/benefit ratio	15	19.74
		b. I have stopped using biologics currently	23	30.26
		c. I have not used any biologics before as well as now	36	47.37
		d. others	0	0
		e. No response	2	2.63
10.	Do you find telemedicine consultation good in terms of diagnoses?	a. Never (<1%)	2	2.63
		b. Rarely (1–33% of time)	15	19.74
		c. Sometimes (34–66% of time)	31	40.79
		d. Often (67–99% of time)	12	15.79
		e. Always (100% of time)	0	0
		f. I am not doing any telemedicine consultation	14	18.42
		g. No response	2	2.63

(84.2%) dermatologists preferred to use only topical drugs along with oral antihistamines during the pandemic. Thirty-four (44.7%) dermatologists were using immunosuppressives sometimes (24–66% of time) and 73 (96.1%) agreed that we should be more cautious while prescribing these drugs during the COVID-19 pandemic. The main indication to start immunosuppressives was pemphigus followed by eczemas. For the treatment of patients on long term immunosuppressants, 44 (57.9%) dermatologists have reduced the dose of immunosuppressants to minimal to control the disease activity, while 22 (29.0%) had stopped immunosuppressants and have switched to drugs with no or minimal immunosuppression potential such as dapsone and apremilast. Most of them were using oral steroids for lesser duration and lesser dose in comparison to pre-COVID times. Forty-four (57.9%) dermatologists were always (100% of time) taking account of patient's age and associated comorbidities before prescribing immunosuppressants. Fifty-two (68.4%) dermatologists were giving precautionary advice to patients on immunosuppressive agents to follow preventive measures against COVID-19 [Table 2]. Fifteen (19.7%) dermatologists were using biologics depending on risk-benefit ratio and 23 (30.3%) have currently stopped using them altogether. Due to the pandemic, 41 (54.0%)

dermatologists had either completely stopped doing aesthetic procedures or were doing these procedures only in follow-up cases.

Common skin manifestations of COVID-19 are pseudofrost bite like lesions, urticarial rashes and varicella like eruption.³ Forty-six (60.5%) dermatologists were aware of all these manifestations. Six (7.9%) and 21(27.6%) dermatologists were aware of only pseudofrost bite such as lesions and only urticarial rashes as the sole manifestation of COVID-19, respectively. Many dermatological associations have provided recommendations regarding judicious use of immunosuppressants and biologics during the COVID pandemic.^{4,5} In the present study, 46 (60.5%) dermatologists were aware of guidelines or recommendations on the use of immunosuppressants [Table 3].

The COVID-19 pandemic has made a great impact on dermatology services all around the globe. Muddasani *et al.* found a reduction in dermatology practice in the United States especially in areas with a high COVID-19 prevalence.⁶ In India, even during the unlocking phase; there was still a reduction in the number of dermatology patients seen per day, as seen in the present survey.

Table 2: Changes in prescription pattern

S. No.	Question in survey	Options	No. of responses (n)	Percentage of responses (%)
1.	Has COVID-19 affected your prescription pattern?	a. Strongly agree b. Agree c. Disagree d. Strongly disagree e. No response	9 41 22 3 1	11.84 53.95 28.95 3.95 1.31
2.	Has the average number of drugs per prescription reduced during the COVID-19 pandemic?	a. Never (<1%) b. Rarely (1–33% of time) c. Sometimes (24–66% of time) d. Often (67–99% of time) e. Always (100% of time) f. No response	16 29 26 3 1 1	21.05 38.16 34.21 3.95 1.31 1.31
3.	Are you using immunosuppressive drugs during the COVID-19 pandemic?	a. Never (<1%) b. Rarely (1–33% of time) c. Sometimes (24–66% of time) d. Often (67–99% of time) e. Always (100% of time) f. No response	8 32 34 1 0 1	10.53 42.10 44.74 1.31 0 1.31
4.	Should dermatologists be more cautious while prescribing immunosuppressives during the COVID-19 pandemic?	a. Strongly agree b. Agree c. Disagree d. Strongly disagree e. No response	22 51 1 1 1	28.95 67.10 1.31 1.31 1.31
5.	Most of your prescription during COVID-19 pandemic is composed of?	a. Topical drugs only with oral antihistamines b. Only topical drugs c. Topical drugs, antihistamines and immunosuppressants d. Others: Please specify e. No response	64 0 11 0 1	84.21 0 14.47 0 1.31
6.	If some of your follow up patients were already on immunosuppressants then, what strategy have you used for them	a. I have stopped their immunosuppressants. b. I have stopped their immunosuppressants and have replaced with topical c. I have stopped immunosuppressants and have changed to alternative drugs which do not cause immunosuppression or have less immunosuppression potential d. I have reduced the dose of immunosuppressants to minimal to control the disease activity e. Not applicable f. No response	0 2 22 44 6 2	0 2.63 28.95 57.89 7.89 2.63
7.	Most common indication for which you have started immunosuppressive drugs in a new patient during COVID-19 pandemic	a. Vitiligo b. Pemphigus c. Eczema d. Lichen planus e. Any other: please specify f. No response	2 53 11 2 5 3	2.63 69.74 14.47 2.63 6.58 3.95
8.	What will be your preference in treatment of severe oral steroid responsive dermatoses during COVID-19 pandemic	a. Oral steroids only b. Oral steroids along with steroid sparing agents like Methotrexate, Azathioprine etc.	5 40	6.58 52.63

(Contd...)

Table 2: (Continued)

S. No.	Question in survey	Options	No. of responses (n)	Percentage of responses (%)
9.	What is the duration of oral steroid you are prescribing during the COVID-19 pandemic currently as compared to before the pandemic started?	c. Oral steroids followed by drugs like apremilast, dapsone	21	27.63
		d. Topical only	8	10.53
		e. Any other	0	0
		f. No response	2	2.63
		a. I am not prescribing oral steroids at all now	2	2.63
		b. I am prescribing oral steroids for a lesser duration in comparison to before	61	80.26
10.	Which dose of oral steroid do you prefer to prescribe during the current COVID-19 pandemic as compared to period before the pandemic	c. I am using oral steroids for the same duration as before	11	14.47
		d. Others: please specify	0	0
		e. No response	2	2.63
		a. I am using same dose of oral steroid as before	22	28.95
		b. I am using a lesser dose of oral steroid in comparison to before	51	67.10
11.	Are you taking account of patient's age and associated comorbidities before prescribing immunosuppressants during the COVID-19 pandemic?	c. I am not using any oral steroids during the COVID-19 pandemic	1	1.31
		d. No response	2	2.63
		a. Never (<1%)	1	1.31
		b. Rarely (1–33% of time)	3	3.95
		c. Sometimes (34–66% of time)	6	7.89
		d. Often (67–99% of time)	18	23.68
12.	Are you doing laboratory COVID-19 screening test before starting immunosuppressives?	e. Always (100% of time)	44	57.89
		f. No response	4	5.26
		a. I order COVID-19 screening test in every patient before starting immunosuppressives	10	13.16
		b. I order COVID-19 screening test in only those who have symptoms or contact history with positive patient or travel history before starting immunosuppressants	20	26.31
		c. I don't order COVID-19 screening test before starting immunosuppressants	25	32.89
		d. I want to order but I am unable to order because of hospital or government policies regarding COVID-19 testing	10	13.16
13.	Are you screening only on basis of clinical signs and respiratory symptoms, travel history and family history alone without lab testing before starting immunosuppressives?	e. other	8	10.53
		f. No response	3	3.95
		a. Never (<1%)	15	19.74
		b. Rarely (1–33% of time)	7	9.21
		c. Sometimes (34–66% of time)	19	25
		d. Often (67–99% of time)	27	35.53
14.	Are you giving precautionary advice to patients on immunosuppressive to follow physical distancing, hand hygiene and use of masks and to report immediately in case of respiratory symptoms	e. Always (100% of time)	6	7.89
		f. No response	2	2.63
		a. Never (<1%)	1	1.31
		b. Rarely (1–33% of time)	2	2.63
		c. Sometimes (34–66% of time)	4	5.26
		d. Often (67–99% of time)	15	19.74
		e. Always (100% of time)	52	68.42
		f. No response	2	2.63

Table 3: Awareness regarding dermatological manifestations of COVID-19 and guidelines on use of immunosuppressants

S. No.	Question in survey	Options	No. of responses (n)	Percentage of responses (%)
1.	Please select the dermatological manifestation of COVID-19 which you are aware	a. Pseudo-frost bite like lesions	6	7.89
		b. Urticarial rashes	21	27.63
		c. Varicella like eruption	0	0
		d. All the above	46	60.53
		e. No response	3	3.95
2.	Are you aware of any national or international guidelines for the use of immunosuppressives in dermatology during COVID-19 pandemic?	a. Yes, I have heard about such guidelines	10	13.16
		b. Yes, I have heard and read these guidelines	14	18.42
		c. No, I have not heard about such guidelines	28	36.84
		d. Yes, I have heard, read and trying to practice those guidelines	22	28.95
		e. No response	2	2.63

Teledermatology is the first step toward social distancing. Virtual consultations have increased in comparison to face to face consultations in India.⁷ Due to the pandemic, about 51.3% dermatologists were using a telemedicine platform along with physical consultation, 34.2% were doing physical consultations only and no dermatologist was doing tele consultation alone. While in a global survey, 37.3% of dermatologists were using a combination of teledermatology and in-person consultations, 37.8% were doing tele-consultation only and 9.3% were doing physical consultations alone.⁸ The difference may be due to the resources and infrastructure available for teledermatology is still in developing stage in our country. In the present study, 31 (40.8 %) dermatologists found telemedicine consultation good in terms of diagnosis only sometimes (34–66% of time) while in a study by Temiz *et al.*, teledermatology was found suitable in nearly 70% of the patients.⁹ Difference may be due to poor quality of image or mode of teledermatology used.

Around 60% dermatologists are using both mask and face shields, while 35.5% are using face mask alone during patient examination. We were unable to find this observation in the previous studies. These findings have not been studied previously to the best of our knowledge. Correct use of personal protective equipment along with hand hygiene is critical to prevent its transmission.

Immunosuppressive drugs can be continued in patients without COVID-19 infection who are already taking them at a low dose; however, the use of these drugs in new cases should be balanced between the risk and benefit ratio on case-to-case basis.^{4,5} Most dermatologists in the present study are now using a lesser dose and lesser duration of oral steroids in comparison to before COVID. For the treatment of patients on long-term immunosuppressants, 44 (57.9%) dermatologists have reduced the dose of immunosuppressants to minimal to control the disease activity while 22 (29.0%) had stopped immunosuppressants and have switched to drugs with no or minimal immunosuppression potential such as dapsone

and apremilast. Similar findings were seen in another study where 42.2% dermatologists preferred to decrease the dose of immunosuppressants in a stable disease and 32.5% preferred smaller molecules like apremilast in disease activity.¹⁰

Aesthetic dermatology practices have reduced to a great extent. The risk of spreading infection is more while performing cosmetic treatments over the face area, as mask needs to be removed. Stringent disinfection, cost of full personal protective equipment has decreased the frequency of aesthetic procedures. Furthermore, many patients may not come for aesthetic procedures because of economic setback.^{11,12} Due to the pandemic, nearly half of practitioners have either completely stopped aesthetic procedures such as peels, LASER, dermatosurgery procedures or are doing these procedures only in follow-up cases. In a survey from various countries, only 7.4% of participants were doing cosmetic procedures.⁸

Forty-six (60.5%) dermatologists were aware of all three common skin manifestations of COVID-19, that is, pseudofrost bite like lesions, urticarial rashes and varicella like eruptions and guidelines or recommendations on the use of immunosuppressants respectively. This finding was not noted in the previous studies.

The study reflects how COVID-19 pandemic has affected the practices and prescription patterns among dermatologists in the western part of India. It also shows the level of awareness regarding COVID-related cutaneous manifestations and recommendations on use of immunosuppressants in this region. However, because of small sample size, the present study gives only a small snapshot and more studies with large sample size are required.

Limitation of the present study is small sample size, cross-sectional study design and recall bias. Information regarding years of experience and specific reasons for doing physical consultation were not included.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent.

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Conflicts of interest

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