

Assessment of Dermatology Residents During the Covid-19 Pandemic: A Single Institute Experience

To meet the challenges of Covid-19, educators had to make sudden revisions to the educational curriculum and examination methods.^[1] Universities worldwide have adopted online teaching methods through video conferencing platforms like google meet and zoom, which provide basic plans free of charge.^[2,3]

Quarterly resident assessment via spotter examination and viva is an integral part of our department's training program to evaluate residents, and aid in their learning. Our conventional spotter examination includes rallying approximately 40 patients with diverse dermatological diseases to our out-patient department. After a meticulous screening, about 20–30 cases are selected for the examination and residents are assessed based on five cases by two examiners individually. Our conventional viva exam involves residents shuffling between five stations. Each station includes one or two dermatology topics, and is led by one examiner.

Considering the significant reduction in the patient load in our out-patient and in-patient services, and strict adherence to the norm of social distancing, we planned a virtual assessment for the residents. For the spotter assessment, we divided the residents and examiners into five groups. Each group had two examiners, 4–5 residents, and two senior residents for coordinating the exam. Each resident was shown photographs of eight clinical cases in google meet using PowerPoint. In addition, the final-year residents were asked to work up live cases admitted in our in-patient ward and were evaluated virtually through google meet by presenting clinical images of the same cases. The viva lasted for approximately 30 min per short case and 5 min per spotter. Each examiner evaluated 4-5 residents with

four cases, and two examiners assessed each resident.

The viva exam, which involved interviewing residents on various dermatology topics, was also conducted virtually using google meet [Figure 1]. The residents and examiners were divided into two equal groups with eleven stations each. Five of the eleven stations were “viva stations,” and the remaining were “waiting stations.” Each viva station was headed by one examiner. The distribution of the topics into these five viva stations is outlined in Figure 1. At the beginning of the viva, we assigned each resident to one station using separate google meet links. Residents moved to the next station every 15 min. In case a viva exceeded 15 min, their waiting period at the next station decreased. Unless the viva exceeded 30 min, this arrangement was fail-safe. Each examiner interviewed eleven residents, and each resident faced five examiners.

We sent online feedback forms using <https://docs.google.com/forms/u/0/to> all residents and examiners after the spotter and viva examinations and recorded their responses anonymously [Table 1]. According to the residents and examiners, the virtual spotter exam was well organized and time efficient. Residents faced technical snags in internet Wi-Fi services, audio-visual output, and lag in loading images. At the same time, examiners complained of poor audio connection and background noise while interviewing some residents. Residents suggested allotting a predesignated time to analyze the images and providing multiple views of a lesion. They also sought context to the images like necessary demographic details. They acknowledged the variety of cases, from classical to rare disorders but proposed that the difficulty level be uniform

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Table 1: Feedback questions and responses from residents and examiners for the spotter and viva examinations

Feedback questions	Responses			
	Spotters		Viva	
	Residents (n=20)	Examiners (n=4)	Residents (n=7)	Examiners (n=4)
Response rates	95.2%	44.4%	35%	40%
What is your overall rating of the exam on a scale of 0 to 10?# (mean±SD)	8.2±1.0	7±0.8	8.9±0.7	8±0
<i>P</i>		0.036*		0.038*
Did you face any technical issues/hassles during the exam?#				
Yes	7 (35%)	2 (50%)	0	0
No	13 (65%)	2 (50%)	7 (100%)	4 (100%)
<i>P</i>	0.263	1.00	0.16	0.125
If you've answered "yes" to the previous question, please provide details#				
What aspects of the exam did you like?#				
What aspects of the exam could be better?#				
Which mode of examination do you prefer?#				
Virtual with clinical images	1 (5%)	1 (25%)	4 (57.1%)	1 (25%)
In-person with real patients	13 (65%)	2 (50%)	2 (28.6%)	3 (75%)
Don't have a preference	6 (30%)	1 (25%)	1 (14.3%)	0
<i>P</i>	0.004*	0.779	0.368	0.317
Did you get sufficient time to assess the images?				
Adequate	10 (50%)			
Satisfactory	5 (25%)			
Inadequate	5 (25%)			
<i>P</i>	0.287			
How do you feel about your performance on this test?				
Great	0		0	
Pretty good	2 (10%)		0	
OK	11 (55%)		5 (71.4%)	
Not so good	4 (20%)		1 (14.3%)	
I feel bad	3 (15%)		1 (14.3%)	
<i>P</i>	0.014*		0.102	
According to you, what was the difficulty level of your cases (or questions in viva exam)?				
Too difficult	3 (15%)		0	
More difficult than expected but fair	7 (35%)		3 (42.9%)	
As expected	8 (40%)		4 (57.1%)	
Easier than expected but fair	2 (10%)		0	
Too easy	0		0	
<i>P</i>	0.158		0.705	
How stressed were you during the exam?				
Severely stressed	1 (5%)			
Moderately stressed	11 (55%)			
Mildly stressed	5 (25%)			
Comfortable/appropriate for an exam	3 (15%)			
Not at all stressed	0			
<i>P</i>	0.011*			
Are you OK with other junior residents attending your viva session?				
Yes	10 (50%)		4 (57.1%)	
No	10 (50%)		3 (42.9%)	
<i>P</i>	1.00		1.00	
How difficult was it to prepare cases for the exam on a scale of 0-10? (mean)		4±0.8		
How effective was this exam in evaluating the residents?				

Contd...

Table 1: Contd...

Feedback questions	Responses			
	Spotters		Viva	
	Residents (n=20)	Examiners (n=4)	Residents (n=7)	Examiners (n=4)
Very effective		0		
Useful		2 (50%)		
Average		1 (25%)		
Needs improvement		1 (25%)		
Not effective at all		0		
P		0.779		
Any other thoughts/comments?#				

#Questions common to all 4 questionnaires. *Statistically significant, $P < 0.05$. SD: Standard deviation

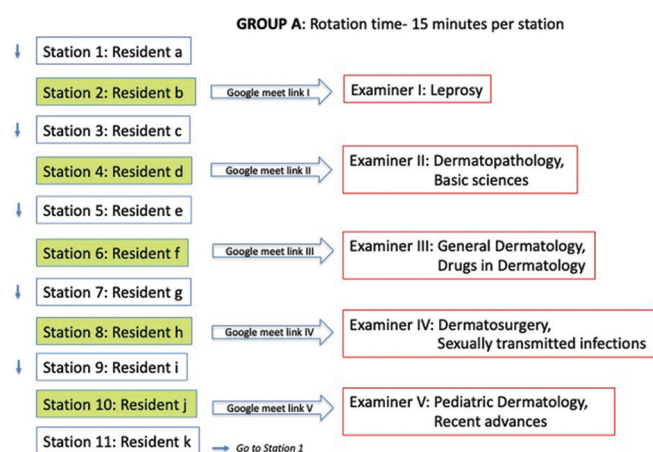


Figure 1: Schematic representation of the viva examination plan

across the training level and groups. They felt that the virtual exam was less stressful than the in-person exam, as they did not have to face the examiners directly and could give the exam from a comfortable place. Examiners observed that the virtual exam was convenient as it avoided the exam day hassle of screening many patients and sending back the unselected cases. Also, it avoided the inconvenience caused to patients in terms of traveling and waiting for long hours. The examiners wanted to allocate more than 5 min per spotter and interview more residents with fewer cases each.

Regarding the viva exam, examiners and residents appreciated the smooth transfer of residents from one station to the next. It was well-timed, efficient, safe, and avoided the arduous task of shuffling residents from one

examination room to another. Examiners needed more time to interview final-year residents and a scheduled 15-min break in between.

Our experience shows the benefits and limitations of virtual exam methods. Residents' acceptance, a key component in the new program, was high. The virtual "picture-based" exam may enhance residents' ability to cope with tele dermatology and vice versa. It supports shifting the emphasis placed on description and diagnosis to management and patient counselling. It serves as an adequate stop-gap measure till the Covid-19 situation improves or maybe even after the pandemic, at least partially, owing to its advantages.

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Conflicts of interest

There are no conflicts of interest.

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