

Improving knowledge of hair loss disorders: Assessing the efficacy of a dermatologist-developed social media video library for patient education



To the Editor: As many as 42% of Americans report utilizing social media to access health information.¹ Despite this trend, a minority of dermatology-related social media posts are produced by board-certified dermatologists.² During clinical encounters, dermatologists regularly rely on verbal instruction or educational text to convey complex information to patients.³ However, through the production of high-quality, publicly available online learning tools, dermatologists have the opportunity to improve continued access to and retention of health information. The purpose of this study is to investigate the efficacy of an online social media video library for improving patient knowledge of hair loss disorders.

We conducted a pre-test/post-test intervention study to assess changes in patients' knowledge of hair disorders after viewing online educational material. Patients were identified during a clinical visit with an alopecia specialist at NYU Langone Health and randomized to watch a brief video on hair cycle physiology, topical minoxidil application, or platelet-rich plasma (PRP) therapy. Videos were made accessible to patients via Instagram through NYU's 'SkinScreen' video library. This study was approved by NYU Langone Health's Institutional Review Board.

Data analyses were conducted using SPSS Statistical Software 28.0 (IBM Corp). Frequencies were calculated to describe the percentage of participants who correctly responded to multiple-choice quiz items before and after watching the educational videos. The McNemar χ^2 test was used to compare the proportions of participants who provided correct responses prior to watching the videos versus after watching the videos. Paired samples *t* tests were used to compare prevideo and postvideo cumulative scores.

We enrolled 100 patients, of which 90 (90%) completed the study (Table I). Participants were randomized to watch videos on the hair cycle (*N* = 29), PRP (*N* = 32), and topical minoxidil (*N* = 29). Eleven participants had already viewed their assigned video at a prior clinical visit; these

Table I. Participant characteristics

Variable	No., % (n = 90)
Sex, female	
Male	18 (20.0%)
Female	72 (80.0%)
Age	
<30	18 (20.0%)
31-40	16 (17.8%)
41-50	21 (23.3%)
51-60	15 (16.7%)
61-70	13 (14.4%)
70+	7 (7.8%)
Highest level of education completed	
High school	1 (1.1%)
Some college	2 (2.2%)
2-y college	2 (2.2%)
4-y college	29 (32.2%)
Graduate school	55 (61.1%)
Other	1 (1.1%)
Alopecia diagnosis	
Androgenetic alopecia	52 (57.8%)
Alopecia areata	10 (11.1%)
Lichen planopilaris	7 (7.8%)
Frontal fibrosing alopecia	11 (12.2%)
Telogen effluvium	9 (10.0%)
Central centrifugal cicatricial alopecia	3 (3.3%)
Other	9 (10.0%)
Treatments prior to study participation	
Topical minoxidil	59 (65.6%)
Platelet-rich plasma	18 (20.0%)
Time elapsed between previously viewing video and participating in the study	
Not applicable: never previously seen video	79 (87.8%)
1 mo	7 (7.8%)
6 mo	1 (1.1%)
1 y	3 (3.3%)

participants' prevideo scores were significantly higher than the prevideo scores of participants who had no prior exposure to the material (76% vs 29%; *P* = 0.029).

Gains were observed in knowledge on all topics. Viewing any of the videos resulted in a significant increase in participants' cumulative survey score (Table II). There was only a single question, regarding hair shedding with PRP, for which there was no statistically significant difference in the proportion of participants who responded correctly prior to watching the video versus after watching

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Table II. Change in patient knowledge of hair cycle physiology and hair loss treatments

Hair cycle video			
Variable	No. correct response		
	Prevideo (n = 29)	Postvideo (n = 29)	P value
Quantity of hair shed each day	11	26	<.001
Anagen, definition	12	24	.002
Catagen, definition	16	26	.013
Telogen, definition	11	25	<.001
Time elapsed between a triggering event and telogen effluvium	17	28	<.001
Cumulative score, % correct	46%	89%	<.001

Platelet-rich plasma video			
Variable	Prevideo (n = 32)	Postvideo (n = 32)	P value
Quantity of blood drawn for PRP	25	31	.031
Number of injections performed during PRP procedure	4	21	<.001
Adverse effects of PRP	11	24	<.001
Hair shedding with PRP*	23	25	.727
Preparation before PRP procedure	13	22	.022
Cumulative score, % correct	48%	77%	<.001

Topical minoxidil application video			
Variable	Prevideo (n = 29)	Postvideo (n = 29)	P value
Quantity of minoxidil used during single application	9	27	<.001
Frequency of application	21	29	<.001
Utility of massage to spread solution	25	29	<.001
Rules regarding hair styling following minoxidil application	9	21	<.001
Cumulative score, % correct	55%	91%	<.001

Bolded for statistical significance, ie, P value <.05.

PRP, Platelet-rich plasma.

*Hair shedding with PRP was the only topic tested for which there was no statistically significant difference in the proportion of participants who responded correctly prior to watching the video versus after watching the video. This may be explained in part by the large proportion of participants (23/32) who correctly answered the question before watching the video.

the video. Eighty-seven percent of respondents described the videos as helpful, and 74% indicated that they would share the video with a friend who wanted to learn more about hair loss.

Social media can transform the way dermatologists communicate with patients. Our results demonstrate video-based educational content is an effective tool for conveying dermatologic health information, supporting the findings of similar studies, which have shown the efficacy of videos for teaching patients about melanoma and skin examinations.^{3,4} The significantly higher baseline scores of participants who had viewed the SkinScreen videos at a prior clinical visit suggest that knowledge gains from video viewership may be sustained over time. Study limitations include its small sample size and lack of a control group.

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Consent: Consent for the publication of all patient photographs and medical information was provided by the authors at the time of article submission to the journal stating that all patients gave consent for their photographs and medical information to be published in print and online and with the understanding that this information may be publicly available.

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Conflicts of interest

Dr Shapiro is a consultant for Aclaris Therapeutics, Incyte, and Replicel Life Sciences. Drs. Shapiro and Lo

Sicco have been investigators for Regen Lab and are investigators for Pfizer. Dr Sukhdeo, Dr Svigos, Dr Yin, Dr Peterson, Dr Gutierrez, Elizabeth Klein, and Maria Karim have no conflicts to declare.

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