Case and Reviews

Counseling for recreational drug use among patients with chronic inflammatory skin disease: A cross-sectional survey

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Abstract

Multiple dermatologic diseases are associated with recreational drug use. Using a survey design, we approached patients with psoriasis, rosacea, and hidradenitis suppurativa to evaluate whether the patients had received counseling on drug use. In our sample, half of the patients with hidradenitis suppurativa were active smokers, and most had received smoking cessation counseling. Patients with psoriasis were also aware of an association with smoking yet not at the same rates as the hidradenitis suppurativa population. Future research is needed to corroborate this data in a larger sample, and to establish improved means to support lifestyle changes and interventions for dermatologic patients.

Keywords: Psoriasis, Hidradenitis Suppurativa, Smoking, Cigarettes, Alcohol, Beer, Wine, E-cigs, vaping, vape

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INTRODUCTION

Patients with chronic, inflammatory skin diseases may have an increased prevalence of recreational drug use.1–5 For example, patients with psoriasis may have an increased prevalence of alcohol consumption and smoking, whereas patients with hidradenitis suppurativa may have an increased prevalence of smoking, alcohol, and marijuana consumption.1,3,6 Furthermore, alcohol use is associated with an increased risk of rosacea.2 To our knowledge, current counseling rates by dermatology providers for recreational drugs is unknown. Our objective was to compare differences in physician counseling for recreational drug use in a dermatology patient population. Additionally, we sought to examine patient knowledge of recreational drug use and their perceived effects on skin disease.

After exemption from the Ohio State University IRB, we developed an online REDCap survey evaluating usage and counseling for common recreational substances, including tobacco, alcohol, e-cigarettes, and mariajuana. The survey was self-administered through a REDCap link and distributed to online, dermatology focused social media and support groups for hidradenitis suppurativa, psoriasis, and acne/rosacea. Inclusion criteria were adults with self-reported diagnosis of psoriasis, acne, rosacea, or hidradenitis suppurativa. From the point of contact and initiation, the completion rate of this survey was 75.6%.

Demographics of our survey participants are provided in Table 1. Nearly half of patients with hidradenitis suppurativa reported current tobacco use, and this proportion was greater than that expected by chance (N=32, 47.8%) (Table 1). Most patients in all three groups were current alcohol users, and these proportions were not associated with skin disease. Counseling for smoking cessation was not associated with skin disease; however, most patients with HS reported dermatologist counseling for smoking cessation (N= 21, 65.7%). There was a significant relationship between skin disease and dermatologist counseling for alcohol use (P = 0.033). Surprisingly, dermatologists were less likely to have recommended alcohol avoidance in patients with acne/rosacea (N=2, 6.9%), compared with hidradenitis suppurativa patients (N=17, 29.8%). Counseling rates for e-cigarette and marijuana use were low among all three disease groups.

	Psoriasis (N=17)	**Hidradenitis Suppurativa (N=67)**	**Acne/Rosacea (N=30)**	***P-value****
Age (Years)				0.861
Mean Age (SD)	34.8 (3.6)	36.9 (1.8)	35.9 (2.7)	
Sex (N, %)				0.5402
Male	5 (29.4%)	17 (25.4%)	5 (16.7%)	
Female	12 (70.6%)	50 (74.6%)	25 (83.3%)	
Race (N, %)				0.1155
White	13 (76.5%)	57 (85.1%)	29 (96.7%)	
Non-white	4 (23.5%)	10 (14.9%)	1 (3.3%)	
Education Level (N, %)				0.0976
Associate degree and below	6 (35.3%)	33 (49.5%)	8 (26.7%)	
Bachelor's degree and above	11 (64.7%)	34 (50.8%)	22 (73.3%)	
Disease Severity (N, %)				
Minimal	4 (23.5%)	17 (25.4%)	11 (36.7%)	
Moderate	10 (58.9%)	40 (59.7%)	19 (63.3%)	
Severe	3 (17.7%)	10 (14.9%)	0 (0%)	

Tobacco Use **(N, %)**				0.011[a]
Current tobacco smoker	5 (29.4%)	32 (47.8%)	5 (16.7%)	
Dermatologist recommended quitting (N, %)				0.115[b,c]
Yes	1 (20%)	21 (65.6%)	2 (40%)	
No	1 (20%)	5 (15.6%)	3 (60%)	
I do not have a dermatologist	3 (60%)	6 (18.8%)	0 (0%)	
"I believe that smoking cigarettes will worsen my skin disease." (N, %)[d]				0.007[b]
Strongly agree/Agree	12 (70.6%)	36 (54.5%)	14 (33.3%)	
Neither agree nor disagree	5 (29.4%)	18 (27.3%)	16 (53.3%)	
Disagree/Strongly disagree	0 (0%)	12 (18.2%)	0 (0%)	
Alcohol **(N, %)**				
Current alcohol user	14 (82.4%)	50 (75.8%)	23 (76.7%)	0.798
Dermatologist recommended quitting (N, %)[e]				0.033[a,c]
Yes	3 (18.8%)	17 (29.8%)	2 (6.9%)	
No	11 (68.8%)	33 (57.9%)	25 (86.2%)	
I do not have a dermatologist	2 (12.5%)	7 (12.3%)	2 (6.9%)	
"I believe that drinking alcohol will worsen my skin disease." (N, %)				0.011[b]
Strongly agree	12 (70.6%)	25 (37.3%)	16 (53.3%)	
Neither agree nor disagree	4 (23.5%)	18 (26.9%)	11 (36.7%)	
Disagree/Strongly disagree	1 (5.9%)	24 (35.8%)	3 (10%)	
E-Cigarettes **(N, %)**				
Current E-cigarette user	9 (52.9%)	16 (24.2%)	5 (16.7%)	0.020[a]
Dermatologist recommended quitting (N, %)				
Yes	0 (0%)	5 (31.3%)	0 (0%)	0.140[b,c]
No	7 (77.8%)	9 (56.3%)	4 (80%)	

I do not have a dermatologist	2 (22.2%)	2 (12.5%)	1 (20%)	
"I believe that vaping will worsen my skin disease." (N, %)[d]				0.123
Strongly agree/Agree	3 (17.6%)	25 (37.9%)	9 (30%)	
Neither agree nor disagree	11 (64.7%)	27 (40.9%)	19 (63.3%)	
Disagree/Strongly disagree	3 (17.6%)	14 (21.2%)	2 (6.7%)	
***Marijuana* (N, %)**				
Current marijuana user	8 (47.1%)	37 (55.2%)	11 (36.7%)	0.236
Dermatologist recommended quitting (N, %)				
Yes	0 (0%)	5 (13.5%)	0 (0%)	0.370[b,c]
No	6 (75%)	26 (70.3%)	11 (100%)	
I do not have a dermatologist	2 (25%)	6 (16.2%)	0 (0%)	
"I believe that marijuana will worsen my skin disease." (N, %)				<0.0001[b]
Strongly agree/Agree	1 (5.9%)	9 (13.4%)	2 (6.7%)	
Neither agree nor disagree	7 (41.2%)	12 (17.9%)	19 (63.3%)	
Disagree/Strongly Disagree	9 (52.9%)	46 (68.7%)	9 (30%)	

***ANOVA was performed to evaluate group differences in mean age. The chi-square test of independence was performed to evaluate group differences in sex, race, education, and current drug use. Significance was set at .05 for all statistical tests.**

[A] Post-hoc comparisons of adjusted residuals were used to evaluate individual cell contribution to statistically significant chi square test results. Cells with an adjusted residual value of +/- 2 indicated counts that would be greater or less than expected by chance.

[b] Fisher's Exact test was performed as <80% of cells had expected counts greater than five.

[C] Variable level "I do not have a dermatologist" not included in statistical analysis to allow direct comparison of counseling rates for patients with dermatologists only.

[d] One missing response in hidradenitis suppurativa group. Proportions shown for N=66 as denominator.

[e] There was a single non-responder for the psoriasis and acne/rosacea disease groups and ten non-responders for the hidradenitis suppurativa disease group.

Table 1. *Sample demographics, disease severity, and recreational drug use*

Most psoriasis and hidradenitis suppurativa patients reported knowledge of tobacco as a risk factor (52.9% and 70.2%, respectively), with hidradenitis suppurativa patients reporting significantly more knowledge of this association than expected by chance (Table 2). There was an association between skin disease diagnosis and knowledge of alcohol as a risk factor (P=.017), with acne/rosacea patients reporting significantly more knowledge of this risk factor than that expected by chance.

	Smoking associated with own skin disease[a]		**Alcohol associated with own skin disease[a]**		**Vaping associated with own skin disease[a]**		**Marijuana associated with own skin disease[b]**	
	Yes N, (%)	**No N,(%)**	**Yes N, (%)**	**No N, (%)**	**Yes N, (%)**	**No N, (%)**	**Yes N, (%)**	**No N, (%)**
Psoriasis (N=17)	9 (52.9%)	8 (47.1%)	9 (52.3%)	8 (47.1%)	1 (5.9%)	16 (94.1%)	1 (5.9%)	16 (94.1%)
Hidradenitis Suppurativa (N=67)	47 (70.2%)	20 (29.9%)	18 (26.9%)	49 (73.1%)	23 (34.3%)	44 (65.7%)	12 (17.9%)	55 (82.1%)
Acne/ Rosacea (N=30)	1 (3.3%)	29 (96.7%)	16 (53.3%)	14 (46.7%)	1 (3.3%)	29 (96.7%)	0 (0%)	30 (100%)
	P <.001		*P = .017*		*P = .001*		*P= .020*	

[a] Chi-Square test of independence was performed to evaluate association between skin disease and knowledge of recreational drug use. Significance was set at .05. Post-hoc comparisons of adjusted residuals were used to evaluate individual cell contribution to statistically significant chi square test results. Cells with an adjusted residual value of +/- 2 indicated counts that would be greater or less than expected by chance.

[b] Fisher's exact test was performed as <80% of cells had expected counts greater than five.

Table 2. *Patient knowledge of recreational drug use and association with own skin disease*

Several limitations to this study exist given the online distribution of our survey. The study was not randomly assigned, the mean age and gender proportions in our sample may not be representative of these disease populations, and respondents self-reported their dermatologic conditions. Further, given the overwhelming public education available on tobacco and alcohol consumption, confirmation bias and availability bias may have impacted survey responses related to these questions. Lastly, there exists a non-response bias when evaluating counseling rates for alcohol given the large number of non-respondents in the hidradenitis suppurativa disease group.

This study suggests that education is reaching dermatology patients in regards to knowledge of environmental risk factors for skin disease; yet, most respondents reported current alcohol use and poor rates of dermatologist counseling for this substance. Additionally, patients with hidradenitis suppurativa reported high rates of tobacco use despite many reporting dermatologist counseling for this substance. There are multiple opportunities for future study, including corroborating this data in a larger sample of patients and secondly, to address the latter practice gap. Dermatologists may need to go beyond education and instead offer prescription and therapeutic support in avoidance of recreational drug use. Further, there is a lack of knowledge among patients and dermatologists with the effects of vaping and marijuana use in these skin diseases. Further research is needed in these areas.

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