We recommend AFL-assisted PDT using higher laser depth parameters in cases of high-grade AK lesions.

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Pityriasis rubra pilaris: A study evaluating patient quality of life in 2 populations

To the Editor: Pityriasis rubra pilaris (PRP) is an inflammatory, papulosquamous condition associated with a variety of debilitating sequelae that is frequently refractory to therapy.[1] Although many cutaneous diseases are known to negatively affect quality of life (QoL),[2-5] the degree to which PRP affects QoL has not been studied. We investigated the impact of PRP on QoL in 2 populations, the international online PRP support group and PRP patients seen within Partners Healthcare System (PHS), using the validated Skindex-29, Dermatology Life Quality Index (DLQI), and Short Form-36 (SF-36). In addition, we collected information on demographics and disease sequelae to elucidate which independent variables are associated with poor QoL.

This study was approved by the Institutional Review Board of Partners Healthcare. In total, 121 dermatologist-diagnosed support group members and 14 PHS patients completed all surveys. Surveys were administered online by using REDCap, a secure web-based software, to adult members of the PRP support group and PHS patients. QoL scores from patients with PRP were compared to existing data for other dermatologic conditions[3] utilizing 2-sample *t* tests. The relationship between mean Skindex-29 scores and independent variables was examined using 2-sample *t* tests and analysis of variance. Correlation between Skindex-29 and DLQI was computed by using Pearson correlation coefficient.

Skindex-29 Functioning scores revealed support group members had worse QoL than patients with all other dermatologic conditions ($P < .01$) included in the analysis (Table I). Skindex-29 Symptoms scores also showed that these PRP patients demonstrated worse QoL than patients with all other dermatologic conditions ($P < .01$) except epidermolysis bullosa ($P = .025$), and Emotions scores demonstrated they had worse QoL than patients with all other diseases ($P < .01$) except vulvodynia ($P = .011$), dermatomyositis ($P = .193$), and cutaneous lupus erythematosus ($P = .033$). DLQI and Skindex-29 scores were significantly correlated ($P < .001$). According to Skindex-29 and SF-36 scores, there was no significant difference in QoL between the 2 populations ($P < .01$).

According to SF-36, those with PRP had worse QoL in role physical, bodily pain, vitality, social functioning, and role emotional subscales than patients with recent myocardial infarction, hypertension, and type 2 diabetes mellitus ($P < .01$).

Factors related to poor QoL included alopecia and joint pain (Table II); 44% of support group members and 37.5% of PHS patients noted that PRP-related hair loss affected their daily social interactions. In addition, 31% of support group members and 18.75% of PHS patients noted joint pain that occurred within 1 month of PRP onset. On the basis of Functioning scores, those >65 years of age at diagnosis, duration of disease <1 year, and palmoplantar keratoderma also had worse QoL (Table II). Palmoplantar keratoderma,

Table I. Skindex-29*quality of life scores in PRP support group members compared with patients with other dermatologic conditions[3]

		Symptoms		Emotions		Functioning	
Dermatologic condition	**N**	**Mean (SD)**	***P* value**	**Mean (SD)**	***P* value**	**Mean (SD)**	***P* value**
PRP	85	57.7 (23.6)	—	56.7 (25.2)	—	52.5 (26.8)	—
Vulvodynia	280	50 (17)	.001	50 (20)	.011	44 (22)	.003
Dermatomyositis	41	44.9 (24.3)	.005	50.4 (26.1)	.193	28.2 (26.6)	<.001
Cutaneous lupus erythematosus	178	41.3 (23.8)	<.001	49.1 (27.8)	.033	28.4 (25.6)	<.001
Epidermolysis bullosa	75	49 (25)	.025	35 (26)	<.001	31 (24)	<.001
Eczema	102	48 (23)	.005	41 (27)	<.001	26 (26)	<.001
Pemphigus	126	37 (22)	<.001	37 (22)	<.001	33 (23)	<.001
Psoriasis	44	42 (21)	<.001	39 (27)	<.001	23 (27)	<.001
Acne vulgaris	63	30 (19)	<.001	41 (25)	<.001	16 (16)	<.001
Cutaneous T-cell lymphoma	95	32 (23)	<.001	29 (18)	<.001	22 (22)	<.001
Rosacea	29	33 (20)	<.001	33 (20)	<.001	16 (18)	<.001
Alopecia	7	31 (24)	.005	27 (33)	.004	14 (23)	<.001
Vitiligo	245	13.9 (14.6)	<.001	35.9 (23.6)	<.001	16.7 (19.5)	<.001
NMSC/AK	136	29 (20)	<.001	20 (19)	<.001	9 (14)	<.001
Without skin disease	107	14 (12)	<.001	9 (13)	<.001	4 (8)	<.001

AK, Actinic keratosis; *NMSC*, nonmelanoma skin cancer; *PRP*, pityriasis rubra pilaris; *SD*, standard deviation.
*Skindex-29 is scored on a linear scale (0-100) with higher scores indicating a worse quality of life.[5]

Table II. Mean Skindex-29* scores in active pityriasis rubra pilaris support group members, by patient characteristic

		Symptoms		Emotions		Functioning	
Characteristic	**N**	**Mean (SD)**	***P* value**	**Mean (SD)**	***P* value**	**Mean (SD)**	***P* value**
Sex							
Male	43	57.1 (27.1)	.830	53.4 (26.3)	.214	54.5 (29.5)	.477
Female	42	58.2 (19.6)		60.2 (23.8)		50.3 (23.8)	
Age at diagnosis							
<50	30	59.0 (24.8)		56.4 (25.0)		49.9 (29.1)	
50-65	38	52.7 (23.0)	.128	53.7 (27.1)	.367	45.7 (24.7)	
>65	17	66.4 (20.9)		64.1 (20.2)		71.9 (17.3)	.002
Duration of disease, y							
<1	18	65.1 (19.8)		65.8 (22.4)		70.5 (19.3)	
1-2	27	50.8 (25.2)	.121	51.2 (27.7)	.161	47.9 (27.2)	.005
>2	40	59.0 (23.3)		56.4 (23.9)		47.4 (26.4)	
Hair loss							
Yes	40	65.3 (22.7)	.006	65.4 (24.4)	.003	61.6 (26.2)	.003
No	44	51.2 (22.6)		49.2 (23.8)		44.1 (36.5)	
Photosensitivity							
Yes	56	60.0 (24.9)	.269	58.0 (25.1)	.608	54.4 (26.8)	.387
No	27	53.8 (21.0)		54.9 (26.3)		48.9 (27.4)	
Palmoplantar keratoderma interfering with daily activities							
Yes	75	58.8 (24.0)	.253	57.9 (25.3)	.259	54.8 (27.2)	.003
No	10	49.6 (19.3)		48.3 (23.7)		35.0 (15.3)	
Ectropion							
Yes	34	59.9 (27.7)	.515	61.5 (28.2)	.158	58.1 (29.0)	.113
No	51	56.2 (20.5)		53.6 (22.6)		48.7 (24.7)	
Hospitalization							
Yes	21	64.6 (22.0)	.121	58.7 (20.9)	.684	57.7 (25.2)	.300
No	64	55.4 (23.8)		56.1 (26.5)		50.7 (27.2)	
Joint pain							
Yes	25	68.7 (23.1)	.006	72.1 (24.7)	<.001	68.5 (24.6)	<.001
No	59	53.3 (22.5)		50.5 (22.8)		45.6 (25.1)	

SD, Standard deviation.
*Skindex-29 is scored on a linear scale (0-100) with higher scores indicating a worse quality of life.[5]

which can impede ambulation and limit hand dexterity, interfered with daily activities in 88.5% of support group members and 62.5% of PHS patients.

PRP worsened with sun exposure in 65.3% of support group members and 64.3% of PHS patients. Ectropion developed in 38.8% of support group members and in 7.1% of PHS patients. Skin disease led to hospitalization in 25.6% of support group members and 21.4% of PHS patients. Of note, support group members and PHS patients reported they would trade 7.7 and 14.4 years of salary, respectively, to be free of disease. This patient-reported outcome is utilized as a valuation measure in QoL studies and further emphasizes the profoundly negative impact PRP has on QoL.

This is the first study to assess the effect of PRP on patient QoL and to analyze PRP-related sequelae in relationship to QoL. To our knowledge, this is also the largest study to assess demographic features and characteristics of disease history in patients with PRP. We found that PRP affects patient QoL even more so than many debilitating dermatologic and medical conditions. Limitations of this study include its small sample size, self-reported data, and potential selection bias, as support group members might have more severe disease. Additional investigation is necessary to further elucidate treatment options for PRP and to determine the impact of treatment on QoL over time.

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Factors associated with the utilization of Mohs micrographic surgery in the treatment of microcystic adnexal carcinoma

To the Editor: Microcystic adnexal carcinoma (MAC) is a rare cutaneous malignancy, and in the dermatology literature, the preferred treatment is Mohs micrographic surgery (MMS).[1] However, in a previous analysis of cases from 1973 to 2004, only 12.3% of those treated surgically were removed by MMS.[2]

Given the previously reported low use of MMS, we used descriptive statistics and a logistic regression model to investigate factors associated with the utilization of MMS to treat MAC. We also investigated trends in the utilization of MMS to treat MAC.

Data from the National Cancer Database (NCDB) for the period 2004 to 2015 were analyzed. The NCDB is operated by the American Cancer Society and American College of Surgeons; it captures 70% of all American cancer diagnoses.[3] Individuals with missing demographic data were excluded from the analysis. Covariates were compared between individuals whose tumors were treated with MMS versus with a different type of surgery. When appropriate, covariates with small sample sizes were condensed. To assess patient comorbidities, we used the Charlson-Deyo score, according to which a larger value represents an increasing number of comorbidities.