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Journal
Journal of the American Academy of Dermatology, 91(6)

ISSN
0190-9622

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Publication Date
2024-12-01

DOI
10.1016/j.jaad.2024.07.1507

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Conflicts of interest

None declared.

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https://doi.org/10.1016/j.jaad.2024.07.1506

Characterization of scalp involvement in dermatomyositis based on myositis-specific antibody subsets

To the Editor: Myositis-specific antibodies (MSA) are serologic markers that correlate with distinctive dermatomyositis (DM) features.[1] While many studies have sought to characterize these phenotypes, few have directly studied scalp involvement, an overlooked but problematic manifestation of DM.[2,3] In this study, we sought to identify the prevalence and features of scalp involvement based on MSA subsets.

Following institutional review board approval, we screened our institution's electronic medical records to identify patients with ICD-10 code M33.1 (DM) seen between 2013 and 2023. Only patients with positive MSA (NXP2, TIF1, Mi2, MDA5, SAE, ARS [Jo1, PL-7, PL-12, EJ, OJ]) and diagnosis verified by European Alliance of Associations for Rheumatology criteria were included.[4] Patient demographics, scalp involvement, and clinical features were analyzed. Statistical analysis and table creation were completed in R studio version 4.3.1 (R Foundation for Statistical Computing) and GraphPad Prism 10 (GraphPad Software, Inc). All *P*-values are adjusted using Bonferroni correction with significance ≤.05.

Seventy patients met inclusion criteria (demographics in Table I). Myositis panels were obtained from both commercial (40%, [28/70]) and research laboratories (40%, [28/70]). The highest prevalence of scalp DM was seen in patients with positive SAE (100%, [6/6]), TIF1 (94.1%, [16/17]), and NXP2 (75%, [12/16]) (Table I). Scalp involvement (67.1%, [47/70]) was characterized by erythema (66%, [31/47]), alopecia (48.9%, [23/47]), pruritus (42.6%, [20/47]), and/or scale (23.4%, [11/47]) (Fig 1). TIF1-positive patients had a higher proportion of scalp involvement (94.1%, [16/17]) compared to TIF1-negative patients (58.5% [31/53]) (OR 11.4, 95% CI: 1.8-124.4); $P = .04$). Of patients with scalp DM, TIF1-positive patients also had a higher proportion of scalp erythema (93.8%, [15/16]) compared to TIF1-negative patients (51.6%, [16/31]) (OR 14.1, 95% CI: 1.91-157.1); $P = .02$). Lastly, TIF1-positive patients had a higher proportion of malignancy compared to TIF1-negative patients (17.6% [3/17] vs 1.9% [1/53], $P = .04$), but no significant association was noted between malignancy and overall scalp involvement or specific scalp features.

Scalp DM has increasingly become recognized as a common yet underrecognized manifestation of DM.[1,5] Prior studies have estimated the prevalence of scalp involvement to be 63% to 82%, in line with the 67% prevalence observed in our cohort.[5] Fiorentino et al previously described diffuse alopecia as a feature of MDA5-positive DM and "scalp rash" in TIF1-associated disease.[2,3,5] Similarly, we observed a significant relationship between TIF1 and scalp erythema. Furthermore, TIF1-associated DM has previously been associated with malignancy, a finding also corroborated by our study; however, no significant relationship was noted between malignancy and overall scalp disease.[1] Similarly, NXP2 and SAE are also associated with malignancy, but no significant relationship was noted in the setting of scalp disease in our cohort.[1] Though we did not observe a statistically significant relationship between MDA5 and alopecia, the highest proportion of alopecia was seen with MDA5 (75% [3/4]), Mi2 (75% [3/4]), and NXP2 (75% [8/12]). Limitations of our study include small sample size, dependence on physician documentation, and known variability of myositis panel sensitivities. Larger studies are warranted.

Table I. Demographics by myositis-specific antibody subset

	ARS (*N* = 10)	MDA5 (*N* = 11)	Mi2 (*N* = 10)	NXP2 (*N* = 16)	SAE (*N* = 6)	TIF1 (*N* = 17)	Overall (*N* = 70)
Age							
Mean (SD)	54.1 (12.5)	48.8 (15.5)	55.2 (17.8)	49.9 (20.5)	59.2 (12.1)	56.4 (19.1)	53.5 (17.2)
Sex							
Female	9 (90.0%)	7 (63.6%)	7 (70.0%)	15 (93.8%)	5 (83.3%)	15 (88.2%)	58 (82.9%)
Male	1 (10.0%)	4 (36.4%)	3 (30.0%)	1 (6.3%)	1 (16.7%)	2 (11.8%)	12 (17.1%)
Ethnicity							
White	4 (40.0%)	5 (45.5%)	4 (40.0%)	10 (62.5%)	4 (66.7%)	6 (35.3%)	33 (47.1%)
Hispanic	2 (20.0%)	3 (27.3%)	4 (40.0%)	3 (18.8%)	1 (16.7%)	6 (35.3%)	19 (27.1%)
Asian	1 (10.0%)	3 (27.3%)	0 (0%)	2 (12.5%)	1 (16.7%)	4 (23.5%)	11 (15.7%)
Black	0 (0%)	0 (0%)	1 (10.0%)	0 (0%)	0 (0%)	0 (0%)	1 (1.4%)
Other Race or Mixed Race	3 (30.0%)	0 (0%)	1 (10.0%)	1 (6.3%)	0 (0%)	1 (5.9%)	6 (8.6%)
Myositis panel							
RDL	3 (30.0%)	3 (27.3%)	2 (20.0%)	7 (43.8%)	0 (0%)	6 (35.3%)	21 (30.0%)
LabCorp	1 (10.0%)	1 (9.1%)	0 (0%)	0 (0%)	1 (16.7%)	2 (11.8%)	5 (7.1%)
Quest	0 (0%)	1 (9.1%)	0 (0%)	0 (0%)	0 (0%)	1 (5.9%)	2 (2.9%)
WashU	0 (0%)	1 (9.1%)	2 (20.0%)	3 (18.8%)	2 (33.3%)	1 (5.9%)	9 (12.9%)
OMRF	0 (0%)	2 (18.2%)	3 (30.0%)	2 (12.5%)	1 (16.7%)	0 (0%)	8 (11.4%)
ARUP	2 (20.0%)	1 (9.1%)	0 (0%)	1 (6.3%)	2 (33.3%)	1 (5.9%)	7 (10.0%)
Mayo	0 (0%)	0 (0%)	1 (10.0%)	0 (0%)	0 (0%)	3 (17.6%)	4 (5.7%)
Unknown	4 (40.0%)	2 (18.2%)	2 (20.0%)	3 (18.8%)	0 (0%)	3 (17.6%)	14 (20.0%)
Medical specialists							
Dermatology	3 (30.0%)	7 (63.6%)	6 (60.0%)	7 (43.7%)	3 (50.0%)	7 (41.2%)	33 (47.1%)
Rheumatology	6 (60.0%)	3 (27.3%)	1 (10.0%)	6 (37.5%)	1 (16.7%)	6 (35.3%)	23 (32.9%)
Neuromuscular	1 (10.0%)	1 (9.1%)	3 (30.0%)	3 (18.8%)	2 (33.3%)	4 (23.5%)	14 (20.0%)
Scalp involvement							
Yes	5 (50.0%)	4 (36.4%)	4 (40.0%)	12 (75.0%)	6 (100%)	16 (94.1%)	47 (67.1%)

ARS, Anti-aminoacyl tRNA synthetase; *ARUP*, ARUP Laboratories; *Mayo*, Mayo Clinic Laboratories; *MDA5*, anti-melanoma differentiation-associated gene 5; *NXP2*, anti-nuclear matrix protein 2; *OMRF*, Oklahoma Medical Research Foundation; *RDL*, RDL Reference Lab; *SAE*, anti-small ubiquitin-like modifier activating enzyme; *TIF1*, anti-transcriptional intermediary factor 1γ; *Unknown*, Original laboratory results could not be identified; *WashU*, Washington University, St. Louis Neuromuscular Clinical Laboratory.

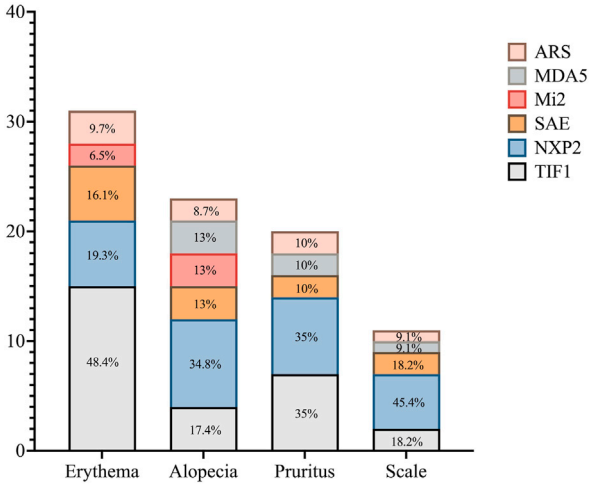

Fig 1. Percentage breakdown of scalp dermatomyositis features by myositis-specific antibody subset. *ARS*, Anti-aminoacyl tRNA synthetase; *MDA5*, anti-melanoma differentiation-associated gene 5; *NXP2*, anti-nuclear matrix protein 2; *SAE*, anti-small ubiquitin-like modifier activating enzyme; *TIF1*, anti-transcriptional intermediary factor 1γ.

Overall, our findings suggest that scalp disease is more likely to present in SAE, TIF1, and NXP2-positive DM. Scalp manifestations, especially erythema, are common, particularly in TIF1-positive patients. Because MSA are associated with varying clinical manifestations, clinicians should be aware of these findings.

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Funding sources: None.

Patient consent: Not applicable.

IRB approval status: 2016-3076.

Previous publication: No data from this study have been previously published.

Key words: alopecia; connective tissue disease; dermatomyositis; myositis-specific antibodies; scalp dermatomyositis; TIF1.

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Conflicts of interest

Dr Min is on the advisory boards of Horizon and BMS, and is an investigator for Amgen, BI, BMS, and Priovant. The authors Arora, Kincaid, Sharma, and Mesinkovska have no conflicts of interest to declare.

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https://doi.org/10.1016/j.jaad.2024.07.1507

Association between skin-related quality of life and race in patients with moderate-to-severe hidradenitis suppurativa: Analysis of two phase 3 clinical trials

To the Editor: Hidradenitis suppurativa (HS) has a significant effect on quality of life (QoL) and disproportionately affects Black patients in the United States.[1] We sought to compare skin-related QoL between Black and White patients with HS with moderate-to-severe disease.

This was a pooled analysis of deidentified data from PIONEER I and II phase 3 trials of adalimumab for HS, accessed through Vivli.[2] Our analysis included trial-eligible patients with United States residence, self-reported Black or White race, and an available baseline Dermatology Life Quality Index (DLQI) score.

Linear regression was used to compare the mean baseline DLQI between Black and White patients while adjusting for age, sex (male, female), smoking status, baseline abscess/nodule (AN), and draining fistula count. In secondary analysis, we used covariate-adjusted linear regression to compare change in DLQI from baseline to week 12 follow-up between Black and White Hidradenitis Suppurativa Clinical Response (HiSCR) responders. Trial results were pooled using fixed-effect inverse variance-weighted meta-analysis. Additional descriptive pain and work productivity outcomes are described in the Supplemental methods (available via Mendeley at https://data.mendeley.com/datasets/59b8crgvbm/1).

Table I describes patient characteristics. Although the total AN count was higher for White patients, draining fistula count was higher for Black patients in both trials. Accordingly, Hurley stage III disease was more common among Black patients.

In both trials, the mean DLQI was higher in Black patients when compared with White patients (Table II). Adjusting for demographics, lesion counts, and smoking, the mean DLQI difference (Black minus White) was 3.5 (95% CI, 1.3-5.8) in PIONEER I and 1.9 (95% CI, −1.8 to 5.6) in PIONEER II. The pooled adjusted mean difference was 3.1 (95% CI, 1.2-5.0; $P = .001$). The pain and work productivity impairment subscale scores were modestly higher in Black patients when compared with White patients, except for presenteeism and overall work impact in PIONEER II. (Table II)

In PIONEER I, the mean ± SD reduction in DLQI at week 12 was −8.0 ± 6.3 in Black HiSCR-responders when compared with −6.0 ± 5.9 in White HiSCR-responders. (Supplementary Table S1, available via Mendeley at https://data.mendeley.com/datasets/59b8crgvbm/1) Adjusting for demographics, lesion count, and smoking, difference in mean DLQI reduction between Black and White HiSCR-responders was −0.2 (95% CI, −3.6 to 3.3). In PIONEER II, the change in DLQI among Black and White HiSCR-responders was −6.1 ± 5.9 and −8.0 ± 6.0, respectively. The adjusted difference was 2.1 (95% CI, −2.2 to 6.4). In meta-analysis, the adjusted difference in the mean DLQI reduction between Black and White HiSCR-responders was 0.8 (95% CI, −1.9 to 3.4; $P = .58$).