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Short Communication

Escalation of Therapy in Hidradenitis Suppurativa: Associations Between Disease Burden and Treatment Patterns

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Abstract

Background: Real-world treatment patterns in Hidradenitis Suppurativa (HS) stratified by disease severity remain inadequately characterized.

Methods: Using the nationwide TriNetX database, two HS cohorts were defined based on diagnosis frequency: 2-3 vs. ≥4 encounters. Cohorts were propensity matched and treatment utilization compared.

Results: Among 60,508 patients (2-3 visits) and 58,114 patients (≥4 visits), those with ≥4 encounters were more likely to be Black or African American (38.3% vs. 32.7%, $p<0.01$) and less likely to be White (19.2% vs. 45.4%, $p<0.01$) compared to those with 2-3 visits. Higher disease burden was associated with increased use of antibiotics (85.3% vs. 65.2%), biologics (19.9% vs. 4.2%), systemic therapies, procedures and opioids (all $p<0.01$).

Conclusions: Increased disease intensity correlated with the need for higher-intensity care. This pattern follows current guidelines, which recommend a stepwise progression from antibiotics in mild disease to systemic and invasive therapies in moderate HS. A higher burden of disease is seen among Black or African American patients compared to White patients. Disparities in disease severity emphasize the need for proactive management and equitable access to care.

Keywords: Hidradenitis Suppurativa; Treatment Patterns; Disease Severity; Biologic Therapy; Health Disparities

Introduction

Although previous studies have identified commonly utilized and efficacious treatments for Hidradenitis Suppurativa (HS), real-world treatment patterns stratified by disease severity remain inadequately characterized [2,3]. HS affects approximately 1% of Western populations, disproportionately impacts women of childbearing age and is associated with obesity, metabolic syndrome and psychiatric comorbidity, all of which complicate therapeutic decision-making and adherence considerably [5]. Examining varying therapeutic strategies across HS severity levels may provide critical insights into the interplay between disease burden, chronicity and clinical management.

Methodology

Data was obtained from the de-identified, nationwide TriNetX database. Two patient cohorts were defined based on the frequency of HS diagnoses using International Classification of Diseases-10 (ICD-10) codes: one cohort with 2 or 3 distinct HS-coded encounters (L73.2) and the second cohort with ≥4 such encounters. The cohorts were 1:1 propensity score matched by age, race, sex, tobacco use, inflammatory bowel disease and BMI. Odds ratios were calculated to compare demographic distributions and post-index utilization of key treatments, including antibiotics (tetracycline, sarecycline, omadacycline, demeclocycline,

doxycycline, tigecycline, minocycline, clindamycin, trimethoprim and derivatives, metronidazole), biologics (adalimumab, infliximab, ustekinumab, secukinumab, etanercept, risankizumab), intralesional injections, opioids and HS-related procedures (incision and drainage, debridement, excision of benign lesions and destruction of benign lesions).

Results

A total of 60,508 patients were included in the 2-3-visit cohort and 58,114 in the ≥4-visit cohort. Patients with ≥4 HS encounters were significantly more likely to be Black or African American (38.3% vs. 32.7%, p<0.01) and less likely to be White (19.2% vs. 45.4%, p<0.01) compared to those with 2-3 visits. Antibiotics were prescribed to 85.3% of patients in the ≥4 group compared to 65.2% in the 2-3 group (OR: 3.05; 95% CI: 2.96-3.14; p<0.01). Biologic use increased from 4.2% in the 2-3 visit cohort to 19.9% in the ≥4 visit cohort (5.56; 5.30-5.82; p<0.01) while similar use of systemic therapies, including immunosuppressants, increased from 3.2% to 9.5% (3.10; 2.93-3.28; p<0.01). Intralesional injections were more common in the ≥4 group (17.7% vs. 4.0%; 5.18; 4.94-5.43; p<0.01), as were HS-related procedures (36.7% vs. 16.0%; 2.97; 2.88-3.05; p<0.01). Use of opioids was also higher in the ≥4 group (58.4% vs. 40.5%; 2.02; 1.97-2.07; p<0.01) (Table 1).

Characteristic	2-3 instances of HS (N=60,508)	≥4 instances of HS (N=58,114)	Odds Ratio	p-value
Age	35.5 ± 15.0	34.8 ± 14.5		<0.01
Sex				
Male	13,306 (21.99%)	13,274(22.84%)		<0.01
Female	45,744 (75.60%)	43, 621 (75.06%)		0.03
Unknown	1,458 (2.41%)	1,219 (2.10%)		<0.01
Race				
White	29,759 (19.18%)	26,408 (45.44%)		<0.01
Black or African American	19,777 (32.69%)	22,236 (38.26%)		<0.01
Asian	1,356 (2.24%)	1,201 (2.07%)		0.04
American Indian or Alaska Native	396 (0.65%)	362 (0.62%)		0.5
Native Hawaiian or Other Pacific Islander	370 (0.61%)	317 (0.55%)		<0.01
Other Race	2,704 (4.47%)	2,362 (4.06%)		<0.01
Unknown Race	6,146 (10.16%)	6,146 (10.16%)		<0.01
Ethnicity				
Hispanic or Latino	6,249 (10.33%)	5,790 (9.96%)		0.04
Not Hispanic or Latino	40,585 (67.07%)	40,462 (69.63%)		<0.01
Unknown Ethnicity	13,674 (22.60%)	11,863 (20.41%)		<0.01
Outcomes				
Antibiotics	39,461 (65.22%)	49,591 (85.33%)	3.05 (2.96-3.14)	<0.01
Biologics	2,513 (4.15%)	11,545 (19.87%)	5.56 (5.30-5.82)	<0.01
Intralesional Injection	2,400 (3.97%)	10,305 (17.73%)	5.18 (4.94-5.43)	<0.01
Opioids	24,496 (40.48%)	33,959 (58.44%)	2.02 (1.97-2.07)	<0.01
Procedures	9,678 (16.00%)	21,306 (36.66%)	2.97 (2.88-3.05)	<0.01
Systemic Therapies	1,942 (3.21%)	5,517 (9.49%)	3.10 (2.93-3.28)	<0.01

Table 1: Demographic characteristics and treatment utilization among patients with 2-3 vs. ≥4 encounters for hidradenitis suppurativa.

Discussion

Increased disease intensity correlated with the need for higher-intensity care. This pattern follows current guidelines, which recommend a stepwise progression from antibiotics in mild disease to systemic and invasive therapies in moderate HS, such as biologic or surgical therapy for severe or refractory cases [1]. Hurley staging remains the most widely used severity metric.

Because no single regimen reliably induces remission, utilization of every therapeutic class rises with advancing stage. Nevertheless, biologics now predominate in severe HS, as shown in our results, owing to their demonstrated efficacy. The TNF-α inhibitor adalimumab and the IL-17 inhibitors secukinumab and bimekizumab, all recently approved for HS, have yielded meaningful clinical improvements [5].

Patients who identified as Black or African American were more likely to present with severe HS compared to White patients, corroborating prior epidemiologic observations [5]. Structural barriers, including delayed diagnosis, limited coverage for medical or surgical interventions and broader socioeconomic inequities most likely underlie this disparity [4]. Dermatologists are urged to monitor disease activity vigilantly, particularly in marginalized patients, to escalate therapy promptly and prevent unnecessary progression.

Conflicts of Interest

The authors declare no conflict of interest in this paper.

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