

Hidradenitis Suppurativa in Patients with Skin of Color:

Do Management Differences Matter?

India S. Robinson, BA¹; Gabriella Santa Lucia, BS¹; Lara Wine Lee, MD, PhD^{1,2}; Colleen Cotton, MD^{1,2}

¹Department of Dermatology and Dermatologic Surgery, Medical University of South Carolina, Charleston, South Carolina
²Department of Pediatrics, Medical University of South Carolina, Charleston, South Carolina

Medical University of South Carolina, Charleston, SC



Background

Hidradenitis suppurativa (HS) is a chronic disease that causes inflammatory lesions typically found in the axillary, inguinal, and perineal regions that can result in permanent scarring, fibrosis, and sinus tract formation.(1)

Although HS is more prevalent in patients with skin of color, research in HS has historically been performed in European and white populations.(2) Caucasian HS patients make up 68% of the patient population included in HS clinical trials while those of African descent comprise only 14%.(3) We aimed to explore management differences in skin of color HS patients compared to Caucasians.

Methods

We performed a cross-sectional retrospective study of HS-associated outpatient encounters and procedures in the Medical University of South Carolina's Research Data Warehouse from January 2017 to December 2020.

We performed descriptive statistics and chi-square analyses with SPSS version 25 (IBM corporation, Armonk, NY).

	Total Patient Count, (%) total patients	Visit count, (%) total visits	HS primary diagnosis Patient Count, (%) total patients	HS primary diagnosis, Visit count, % total visits	HS procedure, patient count (%)	HS procedure, procedure count (%)
White	813 (36.7)	12753 (35.3)	596 (35.7)	1201 (29.3)	188 (31.6)	530 (32.6)
Black	1318 (59.6)	22222 (61.6)	1005 (60.2)	2770 (67.6)	390 (65.5)	1063 (65.4)
Asian	5 (0.2)	53 (0.1)	3 (0.2)	12 (0.3)	2 (0.3)	3 (0.2)
American Indian/ Alaskan	4 (0.2)	75 (0.2)	2 (0.1)	2 (0.0)	0 (0.0)	0 (0.0)
Native Hawaiian	2 (0.1)	37 (0.1)	1 (0.1)	1 (0.0)	0 (0.0)	0 (0.0)
Other	71 (3.2)	995 (2.8)	62 (3.7)	111 (2.7)	15 (2.5)	29 (1.8)

		White, Visit count	Black, Visit count	X2 value (df=1, n=3971) p-value	Fisher's exact
Topical Vit D/ steroid	Count	2	0	4.615	4.614
	Expected	0.6	1.4	P = 0.091	P = 0.091
Metformin	Count	7	40	5.313	n/a
	Expected	14.2	32	P = 0.024	
Anti-depressant	Count	13	13	4.842	n/a
	Expected	7.9	81	P = 0.033	
Thyroid replacement	Count	3	0	6.924	6.923
	Expected	0.9	2.1	P = 0.028	P = 0.028
NSAIDs	Count	11	54	5.558	n/a
	Expected	19.7	45.3	P = 0.020	
Triamcinolone Injection	Count	363a (68.5)	647b (60.9)	34.27 (4, 1625)	n/a
	Expected	336.0	674.0		
Abscess Drainage	Count	61a (11.5)	156a (14.7)	P < 0.001	
	Expected	72.2	144.8		
Simple Excision	Count	35a (6.6)	97a (9.1)		
	Expected	43.9	88.1		
Complex Excision	Count	29a (5.5)	123b (11.6)		
	Expected	50.6	101.4		
Debridement	Count	42a (7.9)	40b (3.8)		
	Expected	27.3	54.7		

Results

The demographic breakdown had a slightly increased representation of skin of color patients when we compared overall patient count (59.6%) to HS-associated visit counts (67.6%) and procedural counts (65.5%), indicating that skin of color patients had more visits and procedures counts than expected. Caucasian HS patients were significantly more likely to be prescribed mood disorder agents (p=0.033) and thyroid replacement hormones (p=0.028). Skin of color HS patients were more likely to receive metformin (p=0.024) and nonsteroidal anti-inflammatory drugs (NSAIDs) (p=0.020) during HS-associated visits. We also found that skin of color patients were less likely to see dermatology (47.1% vs 57.1%) and primary care (14.6% vs 17.6%) and more likely to see surgery (29.0% vs 17.3%) for their HS-associated visits compared to Caucasians. Lastly, skin of color HS patients were more likely to have a complex excision (11.6% vs 5.5%) compared to Whites who were more likely to have triamcinolone injections (60.9% vs 68.5%), p < 0.001.

Discussion

Skin of color HS patients tend to receive more surgical treatments than Caucasian patients. This could be due to higher disease severity in HS patients with skin of color, delay in diagnosis leading to more severe scarring at the time of presentation to care, or differences in treatment strategies related to racial bias, socioeconomic status, and/or access to care. A limitation of our study is the lack of information concerning efficacy of treatment interventions and clinical outcomes. Future studies should include a representative population of HS patients with a higher proportion of skin of color HS patients, perform racial subgroup analyses in clinical trials, include race as a variable when investigating medical and surgical outcomes, and attempt to understand the different mechanisms that could explain differences in disease profiles across racial groups.