

Patient Perspectives on Hidradenitis Suppurativa-induced Scarring and Laser Therapy

Dear Editor,

Hidradenitis suppurativa (HS) is a chronic, debilitating condition characterized by nodules, abscesses, and sinus tracts, typically in the axillae, groin, and inframammary regions, leading to extensive scarring.^[1] HS has established physical, social, and psychological consequences, and is associated with significantly lower body image quality of life (QOL) compared with other chronic dermatological conditions.^[2] However, limited data exist regarding the direct impact of HS-related scarring. Laser and energy-based technologies, including plasma-radiofrequency ablation, fractionated carbon dioxide laser, and 1064-nm Nd:YAG laser, may be effective, noninvasive treatments for HS and residual scarring, with benefits such as reduction of hypertrophic scar thickness and improved texture.^[3-5] We sought to explore the impact of HS scarring and assess patient attitudes about laser therapy.

Thirty-five adult patients with visible HS-related scars were consented and recruited from our HS Center to participate in an anonymous, IRB-approved, 24-question survey from August 2022 to February 2023 [Appendix 1].

Demographics and self-reported disease metrics were collected [Table 1]. The mean participant age was 33.6 ± 10.8 years (range 18–61) and most were female (82.9%). The most commonly affected sites were axillae

(85.7%) and groin (71.4%). Regarding disease severity, 28.6% of participants reported they had mild HS, 48.6% reported moderate HS, and 20.0% reported severe HS. Three participants (8.6%) had previously tried laser hair removal for HS.

Most participants reported their HS scars interfere with participation in physical (60.0%), social (37.1%), and sexual (62.9%) activity, and clothing choices (62.9%). Most reported their scars negatively impact self-esteem (68.6%), self-confidence (65.7%), mood (68.6%), and overall QOL (51.4%) [Table 2]. Many responded they have heard about (42.9%) and were willing to try (82.9%) laser therapy for HS scar reduction. More participants were interested to try laser (82.9%) than topical therapy (77.1%), steroid injections (60.0%), and surgical procedures (45.7%) for scar reduction. In response to the question, “What do you know about laser therapy?,” 20(57.1%) participants responded they did not know much or anything. Of the 6(17.1%) participants not willing to try laser therapy, 1(16.7%) reported the reason related to cost, 3(50.0%) reported a lack of knowledge, and 2(33.3%) reported a lack of necessity. These participants had variable disease sites, duration, and severity, and 2(33.3%) were male. Twelve (50.0%) reported they would receive laser therapy if the out-of-pocket cost were \$50/month, 7(29.2%) reported

Table 1: Participant demographics and self-reported disease metrics

Demographics		$x \pm SD; N (%)$		$N (%)$
Age (years)		33.6 \pm 10.8		
Sex	Male	6 (17.1%)	Female	29 (82.9%)
Race	American Indian or Alaskan Native	1 (2.9%)	Native Hawaiian or Other Pacific Islander	0 (0.0%)
	Asian	2 (5.7%)	White	7 (20.0%)
	Black or African American	19 (54.3%)	Other	6 (17.1%)
Ethnicity	Hispanic	11 (31.4%)	Non-Hispanic	24 (68.6%)
Self-reported disease metrics		$x \pm SD; N (%)$		$N (%)$
Disease severity	Mild	10 (28.6%)	Severe	7 (20.0%)
	Moderate	17 (48.6%)		
Disease duration	<1 year	1 (2.9%)	5–10 years	6 (17.1%)
	1–3 years	4 (11.4%)	>10 years	18 (51.4%)
	3–5 years	6 (17.1%)		
Areas affected	Axillae	30 (85.7%)	Infra-abdominal	7 (20.0%)
	Groin	25 (71.4%)	Buttocks	14 (40.0%)
	Inguinal	21 (60.0%)	Pilonidal	4 (11.4%)
	Upper inner thigh	16 (45.7%)	Face	4 (11.4%)
	Inframammary	15 (44.1%)	Neck	4 (11.4%)
	Back	1 (2.9%)	Scalp	1 (2.9%)

Table 2: Participant responses to quality of life questions

HS-related scars interfere with or negatively impact...	Yes N (%)	No N (%)
Physical activity/sports/exercise	21 (60.0%)	14 (40.0%)
Attending beach/pool	18 (51.4%)	17 (48.6%)
Wearing bathing suit	20 (57.1%)	15 (42.9%)
Wearing clothing of choice	22 (62.9%)	13 (37.1%)
Wearing certain fabrics	17 (48.6%)	18 (51.4%)
Grooming	30 (85.7%)	5 (14.3%)
Using certain skin products	25 (71.4%)	10 (28.6%)
Work	12 (34.3%)	23 (65.7%)
Hobbies	11 (31.4%)	24 (68.6%)
Socialization	13 (37.1%)	22 (62.9%)
Attending social events	15 (42.9%)	20 (57.1%)
Going out in public	11 (31.4%)	24 (68.6%)
Dating	10 (28.6%)	25 (71.4%)
Sexual intimacy	22 (62.9%)	13 (37.1%)
Self-esteem	24 (68.6%)	11 (31.4%)
Self-confidence	23 (65.7%)	12 (34.3%)
Mood	24 (68.6%)	11 (31.4%)
Overall quality of life	18 (51.4%)	17 (48.6%)
Outlook on life	11 (31.4%)	24 (68.6%)
Which characteristics of HS-related scars bother you...	Yes N (%)	No N (%)
Color	28 (80.0%)	7 (20.0%)
Texture	27 (77.1%)	8 (22.9%)
Pain	31 (88.6%)	4 (11.4%)
Restriction in movement	29 (82.9%)	6 (17.1%)
Limitation of daily activities	29 (82.9%)	6 (17.1%)
Which physical manifestations of HS, other than scarring, bother you...	Yes N (%)	No N (%)
Dyspigmentation	25 (71.4%)	10 (28.6%)
Odor	25 (71.4%)	10 (28.6%)
Draining	34 (97.1%)	1 (2.9%)
Pain	32 (91.4%)	3 (8.6%)

\$100/month, 1(4.2%) reported \$500/month, and 1(4.2%) reported unlimited cost. We recognize that the single-institution, cross-sectional design, relatively small sample size, and potential response bias limit our findings.

In conclusion, despite HS scarring being considered a primarily cosmetic concern, patients with HS scarring are notably affected by their scars. According to our results, affected individuals demonstrate great interest in laser therapy. Given the high patient appeal, future studies assessing the comparative efficacy of laser therapies for HS-related scarring are warranted. However, as laser therapy is not typically covered by insurance, out-of-pocket costs may be limiting. In addition, a lack of patient knowledge serves as an obstacle. These conclusions introduce the need for greater patient education regarding laser therapy and efforts to increase the affordability of laser therapy for HS patients.

Ethical policy and institutional review board statement

The study design was approved by the Einstein Institutional Review Board (IRB# 2022-14265).

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Conflicts of interest

There are no conflicts of interest.

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APPENDIX 1. THE IMPACT OF HIDRADENITIS SUPPURATIVA-INDUCED SCARRING ON QUALITY OF LIFE SURVEY

The Impact of Hidradenitis Suppurativa-Induced Scarring on Quality of Life Survey

1. What is your age? _____
2. What is your gender? _____
3. Are you of Hispanic, Latino, or of Spanish origin?
 - Yes
 - No
 - Prefer not to answer
4. How would you describe yourself? Check all that apply.
 - American Indian or Alaska Native
 - Asian
 - Black or African American
 - Native Hawaiian or Other Pacific Islander
 - White
 - Other (please specify): _____
 - Prefer not to answer
5. How long have you had HS?
 - <1 year
 - 1-3 years
 - 3-5 years
 - 5-10 years
 - >10 years
6. How would you describe your HS disease severity?
 - Mild
 - Moderate
 - Severe
7. Where does HS affect you? Check all that apply.
 - Axilla (underarms)
 - Groin (pubic hairline/ genitals)
 - Inguinal (bikini line/ creases)
 - Upper inner thigh
 - Inframammary (below breasts)
 - Infra-abdominal (below stomach/ stomach folds)
 - Buttocks
 - Pilonidal
 - Face
 - Neck
 - Other (please specify): _____
8. What treatments have you received for HS? Check all that apply.
 - Topical antibiotics (clindamycin gel/lotion, Hibiclens)
 - Oral Antibiotics (rifampin, metronidazole, levofloxacin, doxycycline, Bactrim, etc.)
 - IV antibiotics (ertapenem, ceftazidime/avibactam, vancomycin/zosyn)
 - Hormonal agents (finasteride, spironolactone, oral contraceptives/birth control)
 - Biologics (Humira, Infleximab, Skyrizi, etc.)
 - Injections (intralesional [directly into lesions], intramuscular [directly into buttocks])
 - Oral retinoids: Isotretinoin (Accutane), acitretin
 - Incision & Drainage
 - Surgery
 - Laser hair removal
 - Other (please specify): _____
9. **HS scars** interfere with your participation in the following activities (check all that apply):
 - Physical activity/Sports/Working out/Dancing
 - Going to the beach or pool
 - Wearing a bathing suit
 - Wearing clothing of your choice
 - Wearing certain fabrics
 - Grooming (eg, shaving, waxing, deodorant)
 - Using certain skin products (eg, body soap, lotion, perfume)
 - Working
 - Hobbies
 - Being intimate with sexual partner
 - Other (please specify): _____
10. **HS scars** interfere with your social life by limiting your ability to (check all that apply):
 - Socialize with friends and family
 - Attend events or parties
 - Go out in public
 - Other (please specify): _____
11. **HS scars** interfere with your romantic life by limiting (check all that apply):
 - Dating
 - Meeting new partners
 - Sexual activity
 - Other (please specify): _____
12. **HS scars** negatively impact your (check all that apply):
 - Self-esteem
 - Overall quality of life
 - Mood
 - Self-confidence
 - Outlook on life
 - Other (please specify): _____
13. Which *physical* manifestation of **HS** bothers you the *most*? Rank from 1-6, with 1 being the most bothersome and 6 being the least bothersome.
 - _____ Scars
 - _____ Dyspigmentation
 - _____ Odor
 - _____ Draining
 - _____ Pain
 - _____ Other (please specify): _____

14. What bothers you the *most* about your **HS scars** in general? Rank from 1-6, with 1 being the most bothersome and 6 being the least bothersome.
- _____ Color
 - _____ Texture
 - _____ Pain
 - _____ Restriction in movement
 - _____ Limitation of daily activities
 - _____ Other: (please specify): _____
15. How often do your **HS scars** interfere with your day-to-day life?
- Every day
 - Most days
 - Some days
 - Rarely
 - Never
- Questions 16-18 are on whether you agree with the following statements.
16. My **HS scars** have a negative impact on my mental health.
- Strongly Disagree
 - Disagree
 - Neither Agree nor Disagree
 - Agree
 - Strongly Agree
17. My **HS scars** have a negative impact on my self-esteem.
- Strongly Disagree
 - Disagree
 - Neither Agree nor Disagree
 - Agree
 - Strongly Agree
18. My HS diagnosis has made me a stronger person.
- Strongly Disagree
 - Disagree
 - Neither Agree nor Disagree
 - Agree
 - Strongly Agree
19. Have you heard about the use of laser therapy for treating **HS-related scarring**?
- Yes
 - No
20. What do you know about laser therapy?
- _____
- _____
21. Would you be willing to try laser therapy for **HS scar reduction**?
- Yes
 - No
22. If you answered No to question 21, please specify why:
- _____
- _____
23. If you answered Yes to question 21 and insurance does not cover laser treatment, which of the following ways would you be willing to cover the costs of the laser?
- Out-of-pocket payment up to 50 per month
 - Out-of-pocket payment up to 100 per month
 - Out-of-pocket payment up to 500 per month
 - Out-of-pocket payment up to a certain amount per month. Please specify: _____
 - Out-of-pocket payment- any cost
 - Other (please specify): _____
24. Which of the following therapies would you be willing to try for **HS scar reduction**? (check all that apply):
- Topical therapy
 - Steroid injections
 - Laser
 - Surgical procedures
 - Other (please specify): _____