

Hidradenitis Suppurativa and Food Insecurity: A Stratified Analysis

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Background

Rationale:

- Hidradenitis suppurativa (HS) is a chronic inflammatory skin condition that affects 1-4% of the population¹
- Prior research has shown association between obesity and HS^{2,3}
- Emerging evidence indicates an association between food insecurity and obesity^{2,3}
- While previous research has raised importance of exploring social determinants of health in HS, little exploration has been done to assess which factors are important to consider^{2,4}

Objective:

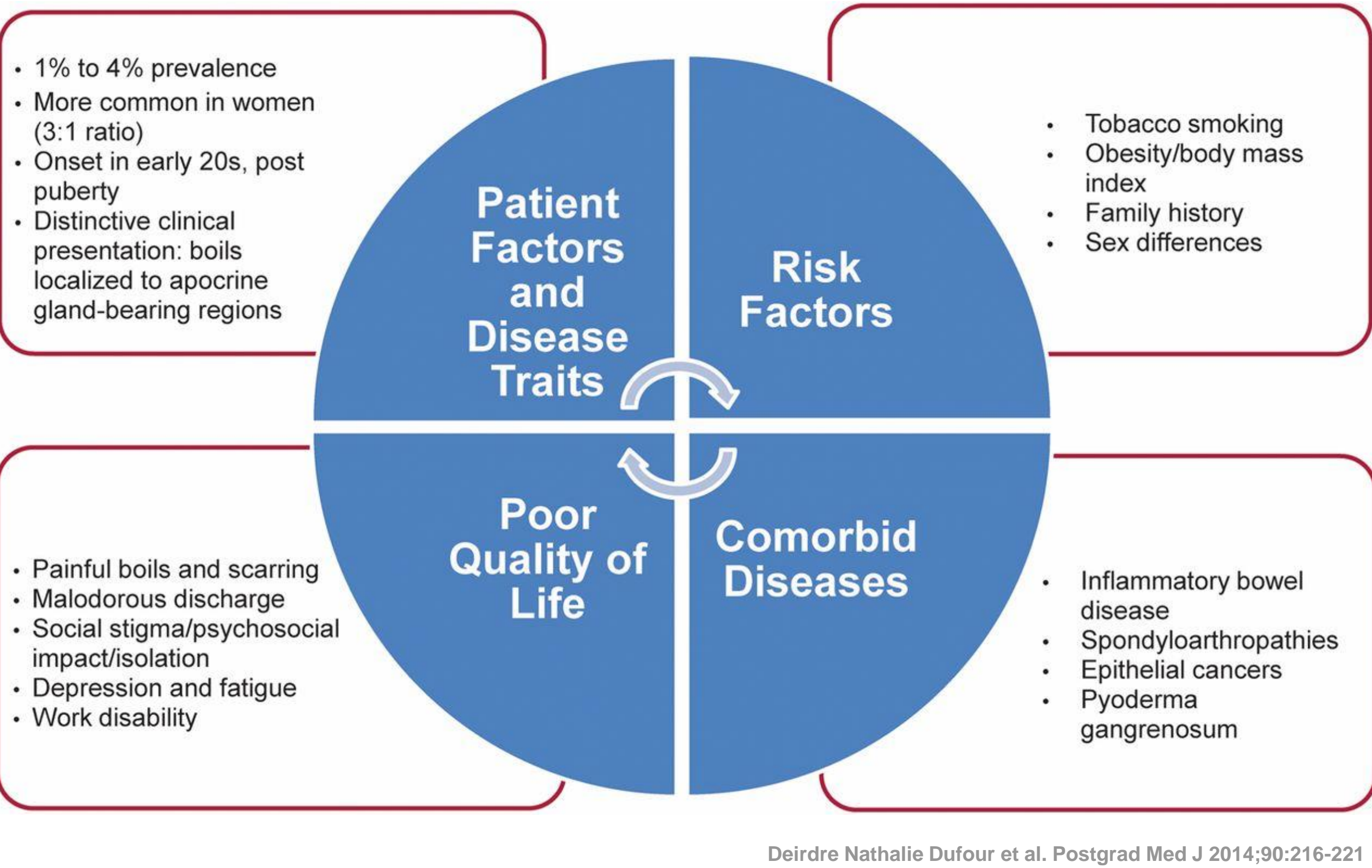
- This study's aim was to investigate the association between HS and food insecurity, while adjusting for potential confounders of sex, race, and age

Figure 1. Nodules and abscesses characteristic of morphology.⁵



Overview of HS

Figure 2. Overview of HS including epidemiology, clinical features, common co-morbidities, and complications



Methods

- Individuals ≥ 18 years old with self-reported diagnosis of HS as well as those without HS were identified through the *All of Us* database
- Final sample included 127 individuals with HS and 52842 non-HS controls in the same database for whom demographic information was available on sex, race, and age and who completed the Children's HealthWatch Hunger Vital SignTM screening survey (validated for use among adults in 2017)
- Performed logistic regression modeling to account for effect modification by sex, race, and age on food security status in HS individuals
- Stratified data by food insecurity status and ran univariate and multivariate logistic regression models to analyze effects of sex, race, and age between those with and without HS

Results: Food Security in HS

Table 1. Logistic Regression of Food Security Status in HS group, effect modification by Sex, Race, and Age

Characteristic	OR ¹	95% CI ¹	p-value
Sex			
Male	—	—	
Female	0.38	0.13,1.17	0.088
Race			
White	—	—	
Black or African American	1.42	0.47,4.00	0.52
Other	3.33	1.08,10.3	0.034
Unknown	5.72	0.61,55.0	0.11
Age	0.98	0.95,1.01	0.13

¹OR = Odds Ratio, CI = Confidence Interval

Results: HS vs Controls

Table 2. Logistic Regression HS vs Controls

Characteristic	OR ¹	95% CI ¹	p-value
Groups			
Non-HS	—	—	
Hidradenitis suppurativa (HS)	2.09	1.37,3.11	<0.001
Sex			
Male	—	—	
Female	1.47	1.38,1.57	<0.001
Race			
White	—	—	
Black or African-American	3.76	3.44,4.10	<0.001
Other	2.14	1.98,2.31	<0.001
Unknown	1.69	1.33,2.13	<0.001
Age (in years)			
18-44	—	—	
45-64	0.76	0.71,0.81	<0.001
65+	0.25	0.23,0.27	<0.001

¹OR – Odds Ratio, CI = Confidence Interval

Key HS demographics:

- Mean age was 51.9 years
- 84% female
- 66% White
- 17% Black or African-American
- Food security status significantly associated with HS (OR_{unadjusted} = 3.29 [2.21, 4.80]; OR_{adjusted} 2.09 [1.37, 3.11]), even after adjusting for confounders of sex, race, and age
- HS individuals neither White nor Black significantly increased risk of being food-insecure

Conclusions

- This study supports an association between HS and food insecurity. Use of self-selected population that may not fully represent broader HS population may limit generalizability of findings
- Further research needed to elucidate relationship between HS and food insecurity and how factors such as race may modify it, in order to guide future health interventions

References & Acknowledgments

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