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Examining the race-specific prevalence of hidradenitis suppurativa at a large academic center; results from a retrospective chart review

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Abstract

Hidradenitis suppurativa (HS) is a chronic, inflammatory, debilitating disease of unknown etiology. HS can occur in people of all ethnicities and ages, and affects approximately 3-4% of the United States. To date, few studies have specifically examined the race prevalence of HS; further epidemiological research is needed to identify specific trends among HS and its racial predilections. At our center, 1.3% of African-American patients were seen for HS, compared to 18% of Caucasian patients ($p<0.05$), and the percent ratio of African-American versus Caucasian patients with HS was 7.22:1. Our number ratio of African-American patients versus Caucasian patients with HS was 1.19:1. Studies performed at Henry Ford Medical Center and University of Pittsburgh report ratios of 1.64:1 and 1.98:1 respectively. These data support study trends suggesting HS is more common among patients of African-American descent. A large, population-based study across the United States is needed to better assess the associations between ethnicity and HS. Examining this patient population has the potential to improve our understanding of HS pathophysiology, and will enable clinicians to better manage patients with this disease.

Keywords: ethnicity, hidradenitis suppurativa

Introduction

Hidradenitis suppurativa (HS) is a chronic, inflammatory, debilitating disease of unknown etiology [1]. During acute exacerbations of HS, patients may suffer from malodorous discharge that leads to embarrassment and social stigma, which contribute to low self-worth. Pain associated with HS lesions can be intense and chronic; this is the most significant factor contributing to impaired quality of life among patients [2]. HS can occur in people of all ethnicities and ages and affects approximately 0.3-4% of the United States [3]. It has been suggested that HS may be more common among women, African-Americans, and young adults, though definitive epidemiological information is limited [1].

To date, few studies have specifically examined the race prevalence of HS. Studies conducted at Henry Ford Medical Center and University of Pittsburgh have found the highest frequency of HS among African-American patients, with 54.4% and 65% majorities, respectively [4, 5]. However, a similar study examined race prevalence of HS patients of Olmsted County, Minnesota and reported a Caucasian-majority (90.3%) [6]. This discrepancy may reflect the demographics of these regions; further epidemiological research is needed to identify specific trends among HS and its racial predilections [4].

We conducted a retrospective review of HS patients seen at the University of Cincinnati, Department of Dermatology between July 1, 2012 to December 31, 2015. During this period of time, there were a total 88,120 patients for all diagnoses (both HS and non-HS) at our center. In total, HS patients comprised 0.32% (n=284) of our dermatology clinic patient population. Our findings correlate closely to current literature reporting the prevalence of HS as 0.3-4% in industrialized countries [3]. The US Census Bureau data for 2015 for Hamilton County, Ohio, indicates

Table 1. *Patients with hidradenitis suppurativa, by race.*

	All Patients % (n)	HS Patients % (n)
Total	100 (88,120)	.32 (284)
African-American	12.8 (11,276)	52.5 (148)
Caucasian	76.8 (67,655)	43.7 (124)
Other	3.6 (3,194)	3.9 (11)

that the population of Hamilton County is 26.1% African-American, 69.0% Caucasian, and 4.9% "other" [7].

Patients seen at our clinic for all diagnoses were 12.8% African-American, 76.8% Caucasian, and 3.6% "other" (**Table 1**). Among HS patients, 52.5% were African-American, 43.7% were Caucasian, and 3.9% "other" (**Table 1**). We compared the prevalence of African-American patients with HS and Caucasian patients with HS via chi square test. At our center, 1.3% of African-American patients were seen for HS, compared to 0.18% of Caucasian patients; this difference was significant ($p<0.05$). At our center, the percent ratio of African-American patients with HS versus Caucasian patients with HS was 7.22:1. Single center studies performed at Henry Ford Medical Center and University of Pittsburgh report percent ratios of 1.70:1 and 3.26:1, respectively [4, 5]. Our number ratio of African-American patients with HS versus Caucasian patients with HS was 1.19:1. Studies performed at Henry Ford Medical Center and University of Pittsburgh reported number ratios of 1.64:1 and 1.98:1, respectively [4, 5]. These data support study trends suggesting that HS is more common among patients of African-American descent [8]. However, these findings may underestimate the percentage of black patients with HS, as current literature suggests this specific population experiences decreased access to health care compared to the general population [9].

The overall prevalence of HS at our clinic may also be underestimated, as HS often goes unrecognized or misdiagnosed [5]. In addition, our study findings may not be generalizable to the general population because our study data is limited to a single academic center. A large, population-based study across the United States is needed to better assess the associations between ethnicity and HS. Examining this patient population has the potential to improve our understanding of HS pathophysiology and will enable clinicians to better manage patients with this disease.

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