

# Is There an Association Between Hidradenitis Suppurativa and Fibromyalgia?

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## PRACTICE POINT

- Although fibromyalgia does not occur more frequently in hidradenitis suppurativa (HS) patients, it is important to recognize that HS patients can have comorbidities that should be addressed when possible to improve overall quality of life.

To the Editor:

Hidradenitis suppurativa (HS) is a chronic inflammatory condition that affects approximately 1% to 4% of the worldwide population and is 3 times more common in females than in males.<sup>1</sup> The condition is characterized by painful inflamed nodules in apocrine gland-bearing regions that can progress to abscesses, sinus tracts, and/or scarring. Hidradenitis suppurativa is associated with intense pain, work disability, and poor quality of life.<sup>1</sup>

Recent evidence has suggested that HS is an autoimmune disease resulting from dysregulation of the  $\gamma$ -secretase/Notch pathway, leading to stimulation of the toll-like receptor-mediated innate immunity that contributes to occlusion and inflammation of the hair follicle. Additionally, elevated levels of proinflammatory cytokines such as tumor necrosis factor  $\alpha$  and IL-17 are seen in HS lesions.<sup>2</sup> The autoimmune nature of HS may account for its increased association with other autoimmune disorders such as thyroid disease and potentially with other unexplored conditions such as fibromyalgia.<sup>3</sup>

Fibromyalgia is a chronic pain condition that primarily affects females and is commonly associated with

other autoimmune conditions.<sup>4</sup> The primary objective of this retrospective study was to determine the prevalence of fibromyalgia in HS patients and assess if there is an association between HS disease severity and development of fibromyalgia.

We conducted a retrospective chart review of patients at Wake Forest Baptist Medical Center (Winston-Salem, North Carolina) who were 18 years and older and had a diagnosis of both HS and fibromyalgia from January 2008 to November 2018. The primary end point was the prevalence of fibromyalgia in the HS population. The secondary end point was the association of HS disease severity with the development of fibromyalgia. Hidradenitis disease severity was defined according to the number of body areas affected by HS: mild disease involved 1 body area, moderate disease involved 2 body areas, and severe disease involved 3 or more body areas. Patient age, sex, and race also were recorded.

A total of 1356 patients were seen during this time period for HS. The prevalence of fibromyalgia in the HS population was 3.2% (n=44). Ninety-five percent (42/44) of patients with HS and fibromyalgia were women; 22 (50%) patients had severe disease, 12 (27%) had moderate disease, 7 (16%) had mild disease, and 3 (7%) had an unknown number of affected body areas. Fifty-seven percent (25/44) of patients were diagnosed with HS prior to the diagnosis of fibromyalgia (Table).

In our study, the prevalence of fibromyalgia in HS patients was lower than the overall prevalence estimates of up to 6% in the United States.<sup>5</sup> Although fibromyalgia is associated with other autoimmune conditions, it does not appear that fibromyalgia occurs more frequently in the HS population than the general

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## Hidradenitis Suppurativa and Fibromyalgia Patient Demographics

Patient Age,y/ Sex/Race	HS Severity	Year of HS Diagnosis	Year of Fibromyalgia Diagnosis	Patient Age,y/ Sex/Race	HS Severity	Year of HS Diagnosis	Year of Fibromyalgia Diagnosis
66/F/W	Mild	1998	2014	46/F/B	Moderate	2015	2017
43/F/W	Severe	2016	2017	65/F/W	Severe	2017	2012
44/F/W	Severe	2014	2013	22/F/B	Moderate	2013	2017
39/F/B	Unknown	2012	2016	64/F/W	Unknown	2010	2013
72/F/W	Severe	2014	2013	44/F/W	Mild	2012	2013
45/F/W	Severe	2015	2016	55/F/W	Unknown	1980	2011
59/F/W	Mild	2013	2016	36/F/W	Severe	2014	2010
51/F/W	Severe	2014	2016	39/F/W	Severe	2013	2012
49/F/W	Severe	2014	2015	36/M/W	Moderate	2016	2018
51/F/B	Moderate	2012	2016	39/F/B	Moderate	2009	2013
45/M/B	Severe	2015	2017	53/F/W	Mild	2016	2013
38/F/B	Severe	2012	2012	41/F/W	Severe	2018	2013
42/F/W	Severe	2012	2012	48/F/W	Moderate	2014	2012
52/F/B	Moderate	2013	2010	51/F/W	Severe	2017	2016
60/F/B	Moderate	2003	2015	53/F/W	Moderate	2013	2012
34/F/W	Severe	2008	2014	43/F/B	Severe	2017	2012
38/F/B	Moderate	2012	2012	48/F/B	Severe	2013	2015
61/F/B	Severe	2013	2018	29/F/W	Severe	2014	2013
33/F/W	Mild	2015	2016	26/F/W	Moderate	2013	2013
45/F/W	Mild	2014	2010	55/F/B	Moderate	2014	2018
26/F/W	Severe	2003	2016	48/F/H	Severe	1998	2014
58/F/W	Mild	2013	2010	52/F/B	Severe	2016	2017

Abbreviations: HS, hidradenitis suppurativa; F, female; W, white; B, black; M, male; H, Hispanic.

population. A limitation of this study was that we only included academic outpatient clinic visits at one institution, which may not be representative of the entire HS population. Fibromyalgia was one of the many pain disorders in this population of patients. In this population of HS patients, many had pain issues with diagnoses ranging from chronic pain syndrome to osteoarthritis. Additionally, many patients could meet criteria for fibromyalgia but may not have been formally diagnosed, as it is a diagnosis of exclusion and there is no formal test for diagnosis. Further studies are recommended to evaluate the association between HS and fibromyalgia.

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