
The prevalence of metabolic syndrome in patients with hidradenitis suppurativa

Daniel A. Gold,^a Virginia J. Reeder, MD,^a Meredith G. Mahan, MS,^b and Iltefat H. Hamzavi, MD^a
Detroit, Michigan

Background: Metabolic syndrome is a multifaceted disorder strongly associated with increased risk for development of cardiovascular disease. Chronic inflammatory diseases have been associated with metabolic syndrome. Hidradenitis suppurativa is a chronic inflammatory skin disease with significant physical and emotional sequelae.

Objective: We sought to investigate a possible association between hidradenitis suppurativa and metabolic syndrome.

Methods: A retrospective chart review of all dermatology clinic encounters over an 18-month period identified 366 patients with an appropriate diagnosis of hidradenitis suppurativa. A control population was created from patients seen in the same clinic during the same time period for the diagnoses of either keloids or verruca vulgaris using the matching criteria of age ± 5 years, race, and gender. All participants were examined for characteristics of the metabolic syndrome as defined by the National Cholesterol Education Program Adult Treatment Program III guidelines.

Results: The prevalence of metabolic syndrome in patients with hidradenitis suppurativa was 50.6%, which was significantly higher than the control group at 30.2% ($P < .001$).

Limitations: This was a retrospective review. Some participants could not be analyzed for metabolic syndrome presence as a result of missing data points.

Conclusion: Our results indicate that patients with hidradenitis suppurativa may be at high risk for metabolic syndrome. (J Am Acad Dermatol 2014;70:699-703.)

Key words: acne inversa; dyslipidemia; glucose intolerance; hidradenitis suppurativa; hypertension; metabolic syndrome; obesity; Velpeau disease; Verneuil disease.

Metabolic syndrome is a multifaceted disorder associated with inflammation. It encompasses issues with obesity, dyslipidemia, hyperglycemia, and hypertension and is correlated with an increased risk for the development of cardiovascular disease.¹ Individuals with National Cholesterol Education Program–defined metabolic syndrome are 2.9 times more likely to die

Abbreviations used:

CI: confidence interval
HDL: high-density lipoprotein
IL: interleukin

from all causes. This includes heart disease.² Studies have found that the prevalence of metabolic

From the Departments of Dermatology^a and Public Health Sciences,^b Henry Ford Medical Center.

The Henry Ford Medical Center Department of Dermatology receives support from and this study was funded by the Livingood Fund and Rodzik Fund, neither of which had any role in the design and conduct of the study; collection, management, analysis, and interpretation of the data; or preparation, review, or approval of the manuscript.

Disclosure: Dr Hamzavi has served and/or currently serves as an investigator in clinical trial activities for the following companies: Galderma, ViroXis, Abbvie, La Roche–Posay, Dow, Centocor, Amgen, Clinuvel, and Pfizer. Dr Hamzavi also serves

as a consultant for COMBE. Mr Gold, Dr Reeder, and Ms Mahan have no conflicts of interest to declare.

Accepted for publication November 9, 2013.

Reprint requests: Iltefat H. Hamzavi, MD, Department of Dermatology, Henry Ford Medical Center, 3031 W Grand Blvd, Suite 800, Detroit, MI 48202. E-mail: lhamzav1@hfhs.org.

Published online January 16, 2014.

0190-9622/\$36.00

© 2013 by the American Academy of Dermatology, Inc.

<http://dx.doi.org/10.1016/j.jaad.2013.11.014>

syndrome in the general population is 15% to 34%.³⁻⁵ Chronic inflammatory diseases, including psoriasis and rheumatoid arthritis, have been associated with metabolic syndrome.^{6,7} Hidradenitis suppurativa is a chronic inflammatory skin disease with physical and emotional sequelae. Inflammatory nodules and draining sinuses develop in intertriginous areas and result in pain, chronic drainage, and scarring. The condition is more common in women than in men and has previously been found to be strongly associated with obesity and smoking tobacco.⁸⁻¹⁰ In addition, there was an association between more severe hidradenitis suppurativa and obese women compared with women of normal weight.¹⁰ The highest prevalence of hidradenitis suppurativa is in those aged 18 to 44 years.¹¹ One small study has previously looked for an association between metabolic syndrome and hidradenitis suppurativa. This hospital-based study involved 80 patients with hidradenitis suppurativa and showed an increased prevalence of metabolic syndrome of 40% in patients with hidradenitis suppurativa versus 13% in control subjects.¹² This study focused on inpatients who tend to have more comorbidities and have increased disease severity. The aim of our study was to further investigate the association of metabolic and physiologic alterations in patients with hidradenitis suppurativa and to determine the prevalence of metabolic syndrome in this population.

METHODS

This study was approved by the Henry Ford Hospital Institutional Review Board. A retrospective chart review of 39,055 total encounters in the dermatology clinic from January 1, 2011, to May 31, 2012, was performed. Charts of patients with the *International Classification of Diseases, Ninth Revision* diagnostic code associated with hidradenitis suppurativa were included. In all, 366 patients with an appropriate diagnosis of hidradenitis suppurativa were identified and included in this review. Patients were given a diagnosis of hidradenitis suppurativa by dermatologists based on clinical presentation, including a history of recurrent inflammatory nodules, sterile abscesses, and draining sinuses. Severity of the disease was classified using the Hurley staging system.¹³ Ethnicity was

determined by physician observation. A control population was created using patients seen in the dermatology clinic during the same time period for the diagnoses of either keloids or verruca vulgaris using the matching criteria of age \pm 5 years, race, and gender. Ethnicity for the control population was based on patient and support staff report. Metabolic

syndrome was defined using the National Cholesterol Education Program Adult Treatment Panel III criteria¹⁴ including: high-density lipoprotein (HDL) of less than or equal to 40 mg/dL in males and less than or equal to 50 mg/dL in females, hypertriglyceridemia greater than or equal to 150 mg/dL, blood pressure of greater than or equal to 130/85 mm Hg or a history of hypertension noted by a physician in the patient chart, and hyperglycemia of greater than or

equal to 110 mg/dL fasting or a history of glucose intolerance noted by a physician in the patient chart. Obesity was defined as body mass index 30 or higher or a notation by a physician that the patient was obese. Patients were classified as having metabolic syndrome if they had a minimum of 3 of the 5 above criteria.

RESULTS

The data consist of 366 cases and 366 controls matched on age \pm 5 years, sex, and race. If a patient was missing data on 3 or more of these factors, they were excluded from the analysis. Among all 738 patients, 465 (243 patients with hidradenitis suppurativa and 222 control subjects) had enough data to determine the presence or absence of metabolic syndrome, which was defined as having 3 or more of the following: obesity, hypertriglyceridemia, low HDL, diabetes mellitus, and hypertension. All categorical data are described as count and column percentages, and continuous data as mean, SD, median, minimum, and maximum. Of the 243 patients with hidradenitis suppurativa evaluated, 79.8% were female and 20.2% were male. The age of patients with hidradenitis suppurativa ranged from 9 to 92 years. The mean age was 41.9 years and the median was 42 years. Of the study participants, 65.0% were African American, 18.9% were Caucasian, and the remaining 16.1% were classified as "other" (Table I). A significantly higher proportion of the patients with hidradenitis suppurativa were

CAPSULE SUMMARY

- There is an association between chronic inflammatory processes and metabolic syndrome.
- Hidradenitis suppurativa may also be associated with the metabolic syndrome, which may affect cardiovascular risk profiles of these patients.
- In addition to treating the skin, health care practitioners should screen patients with hidradenitis suppurativa for metabolic syndrome.

Download English Version:

<https://daneshyari.com/en/article/6072397>

Download Persian Version:

<https://daneshyari.com/article/6072397>

[Daneshyari.com](https://daneshyari.com)