immune system, and the effects begin to taper off at approximately 3 to 4 months after the first dose.

The most common adverse event type was administration site reactions, which all were mild or moderate, and all resolved within 3 months (Table I), suggesting a favorable risk-benefit profile for topical 2% SADBE in high-frequency herpes labialis.

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Patients with a familial predisposition to hidradenitis suppurativa have a distinct clinical phenotype

To the Editor: The etiology of hidradenitis suppurativa (HS) involves genetic and environmental factors.[1] Approximately 38% of patients with HS report a family history of HS, and 27% report at least 1 first degree relative with the disease.[2,3]

We explored the potential differences between patients with and without HS in a first degree relative in a prospective cohort of 447 consecutive newly referred patients with HS attending a tertiary dermatologic university center (Department of Dermatology, Bispebjerg Hospital, Copenhagen, Denmark). Information on family history, disease characteristics including demographic and risk factors, severity of HS, specific localization of HS lesions, lipid levels and inflammatory markers in blood, and comorbidities were collected by interview and clinical examination.

In total, 159 (35.6%) patients with and 288 (64.4%) without HS in a first degree relative were identified (Table I). We found significant differences between these 2 groups: patients who reported HS in a first degree relative had an earlier age at onset of HS compared to patients without HS in a first degree relative ($P < .001$), were more often female ($P < .014$), and had more severe disease measured by Hurley score ($P = .006$). Furthermore, anatomic localization of HS lesions varied significantly so that patients with familial HS more often had involvement of the axilla ($P = .012$) and the groin ($P = .012$). Finally, a higher number of anatomic regions affected by HS were seen in patients with familial history ($P = .003$). After multiple adjustment, we found statistically significant differences between patients with and without HS in a first degree relative for age at onset of HS ($P < .001$) and involvement of the axilla ($P = .048$). Treatment patterns did not differ between patients with and without familial history of HS.

Our results indicate that familial cases of HS tend to be more classic in their clinical presentation, whereas the nonfamilial (sporadic) cases are more atypical.

The female preponderance, tendency to obesity, postpubertal onset, frequent premenstrual flares, and the improvement often observed during pregnancy and postmenopause[4] suggest a hormonal influence. However, no specific hormones have been implicated. We found that patients with familial HS were more often women, but no differences were observed between patients with familial and

Table I. Disease characteristics in patients with HS with and without familial predisposition

Characteristics	Patients with HS in a first degree relative (n = 159; 35.6%)	Patients without HS in a first degree relative (n = 288; 64.4%)	Unadjusted *P* value	Adjusted *P* value
Age, y	38.5 (13.6)	40.7 (13.8)	.108	
Age at onset of HS, y	21.5 (10.0)	27.6 (12.4)	<.001	<.001
Sex			.014	.325
Female	113 (71.1)	171 (59.4)		
Male	46 (28.9)	117 (40.6)		
Body mass index (kg/m^2)	29.7 (7.1)	28.5 (7.0)	.074	
Smoking history			.203	
Active	82 (51.6)	170 (59.0)		
Former	43 (27.0)	58 (20.1)		
Never	34 (21.4)	60 (20.8)		
Ethnicity			.426	
White	135 (84.9)	236 (82.2)		
Nonwhite	24 (15.1)	51 (17.8)		
Hurley score			.006	.559
1	45 (28.5)	107 (37.2)		
2	97 (61.4)	133 (46.2)		
3	16 (10.1)	48 (16.7)		
Anatomic region of HS				
Axilla	91 (57.2)	129 (44.8)	.012	.048
Groin	129 (81.1)	202 (70.1)	.012	.452
Gluteal region	61 (38.4)	110 (38.2)	.972	
Other regions*	37 (23.3)	49 (17.0)	.109	
Number of anatomic regions of HS involved	3.3 (1.8)	2.8 (1.6)	.003	.634
Number of regions†				
0	3 (1.9)	7 (2.4)		
1	23 (14.5)	55 (19.1)		
2	42 (26.4)	92 (31.9)		
3	21 (13.2)	38 (13.2)		
4	30 (18.9)	56 (19.4)		
5	15 (9.4)	19 (6.6)		
6	18 (11.3)	15 (5.2)		
7	7 (4.4)	6 (2.1)		
Number of boils in the past month	2.6 (3.8)	2.1 (2.7)	.064	
Laboratory test results				
CRP, mg/L	6.9 (12.6)	7.3 (12.1)	.732	
Neutrophils, 10^9/L	5.4 (2.3)	5.5 (2.4)	.572	
NLR, 10^9/L	2.4 (1.1)	2.5 (1.2)	.196	
Cholesterol, mmol/L	4.7 (1.0)	4.7 (1.0)	.615	
Comorbidities				
Hypertension	15 (9.4)	37 (12.8)	.283	
Diabetes	14 (8.8)	26 (9.0)	.937	
Psychiatric disease	53 (33.3)	84 (29.2)	.361	
IBD	7 (4.4)	23 (8.0)	.153	
Inflammatory arthritis	4 (2.5)	5 (1.7)	.576	
PCOS	11 (6.9)	15 (5.2)	.461	
Prescribed treatment upon initial evaluation‡				
Topical	83 (52.2)	146 (50.7)	.760	
Systemic (antibiotics)	65 (40.9)	124 (43.1)	.656	

Continued

Table I. Cont'd

Characteristics	Patients with HS in a first degree relative (n = 159; 35.6%)	Patients without HS in a first degree relative (n = 288; 64.4%)	Unadjusted *P* value	Adjusted *P* value
Surgery/laser	23 (14.5)	55 (19.1)	.217	
Biologics	9 (5.7)	12 (4.2)	.475	

Categorical variables are number (percentage); continuous variables are mean (standard deviation).Statistical analysis was performed by using univariate logistic regression followed by multiple logistic regression on significant variables from univariate analyses ($P < .05$). Psychiatric comorbidities include schizophrenia, depression/bipolar, anxiety, and other. IBD includes Crohn's disease and ulcerative colitis. Valid cases (n = 447) were available for all variables except number of boils in the past month (n = 443), CRP (n = 434), neutrophils (n = 431), NLR (n = 431), and cholesterol (n = 423).

Topical treatment: Topical azelaic acid (200 mg/g) twice daily. Systemic treatment: oral doxycycline 100 mg twice daily, oral tetracycline 500 mg twice daily, oral rifampicin 300 mg twice daily and oral dalacin 300 mg twice daily. Biologics: subcutaneous Humira 40 mg weekly.

CRP, C-reactive protein; *HS,* hidradenitis suppurativa; *IBD,* inflammatory bowel disease; *NLR,* neutrophil/lymphocyte ratio; *PCOS,* polycystic ovary syndrome.

*Other regions are the scalp, abdomen, retroauricular, and inframammary regions.

†2 × axilla, 2 × groin, 2 × gluteal region, 1 × other regions.

‡Treatment was not included in the regression analysis. Treatment modalities do not sum to 100% because some patients received several treatments.

nonfamilial HS with respect to polycystic ovary syndrome and body mass index.

Mutations in the γ-secretase gene are found in only a small fraction of patients with HS from the general population[5] and in approximately 5% of distinct HS families with an autosomal dominant inheritance pattern who have a severe, extensive disease phenotype.[6] Therefore, this autosomal dominant inheritance pattern of HS is thought to be limited to the few atypical familial forms and underlies only a limited number of HS cases. In contrast, HS in the general population, with and without a reported familial history, might arise from a different genetic origin or may be more reliant on the occurrence of environmental influences.

We conclude that patients with a reported familial history of HS tend to more often be female with severe and widespread disease distinctly clinically characterized by an earlier age at onset and with affection of the axilla. Although no significant differences within prescribed treatment modalities for familial and nonfamilial cases were observed, treating physicians should be aware of the clinical differences. Patients with a familial history of HS may be more aware of symptoms, prompting earlier diagnosis and specialized treatment compared to HS patients without a family history of HS. Studies are warranted to elucidate the genetic and environmental contributions to HS.

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