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Women of Childbearing Age With Hidradenitis Suppurativa Frequently Prescribed Medications With Pregnancy Risk

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ABSTRACT

Introduction: Hidradenitis suppurativa (HS) disproportionately affects women of childbearing age. As almost half of pregnancies in the United States are unplanned, dermatologists must give special consideration to medication safety when managing patients in this population.

Methods: We conducted a population-based cross-sectional analysis utilizing the National Ambulatory Medical Care Survey from 2007 to 2018 (most recent years available) in order to characterize the treatment modalities most commonly being used for treatment of hidradenitis suppurativa in women of childbearing age.

Results: There were 43.8 million estimated total visits for females ages 15 to 44 with HS. Women of childbearing age with HS were most commonly seen by general and family practice (28.6%), general surgery (26.9%), and dermatologists (24.6%). Obstetricians saw 1.84% of all visits. Oral clindamycin was the most commonly prescribed drug, followed by amoxicillin-clavulanate, minocycline, naproxen, and trimethoprim-sulfamethoxazole. Adalimumab was prescribed at an estimated 10.3 thousand visits (0.211%). At visits in which medication from the 30 most common therapies was prescribed, 31% of visits included a medication that was pregnancy category C or above.

Discussion: Nearly a third of women of childbearing age with HS are receiving medications considered teratogenic. As many female patients feel that their physicians are not counseling them regarding the impact of HS therapy on childbearing, the results of this study serve as a reminder to dermatologists and non-dermatologists managing skin disease to continue to facilitate conversations about potential pregnancy risk when prescribing medications with pregnancy risk.

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INTRODUCTION

Hidradenitis suppurativa (HS) disproportionately affects women of childbearing age.[1] In a survey of female HS patients of reproductive age, 83% reported not receiving counseling from their physician on how HS and their prescribed medications could impact childbearing.[2] As almost half of pregnancies in the United States are unplanned, with women ages 18 to 24 most at risk, dermatologists must give special consideration to medication safety when managing patients in this population.[2,3] To our knowledge, the treatment modalities most commonly being used for treating HS in women of childbearing age has yet to be quantified.

MATERIALS AND METHODS

We utilized the National Ambulatory Medical Care Survey (NAMCS) from 2007 to 2018, the most recent years available, for all visits where international classification of disease ninth-modification (ICD-9) code 705.83 and ICD-10 code L73.2 were a primary through quinary diagnosis. Two NAMCS predetermined age categories, 15-24 and 25-44, defined women of childbearing potential as ages 15 to 44. The frequency of visits was determined utilizing survey procedures of SAS v9.4 (SAS Institute Inc., Cary, NC).

RESULTS

There were 43.8 million estimated total visits for females ages 15 to 44 with HS. Demographic data of the study population are included inTable 1.Women of childbearing age with HS were most commonly seen by general and family practice (28.6%), general surgery (26.9%), and dermatologists (24.6%). Obstetricians saw 1.84% of all visits. Oral clindamycin was the most commonly prescribed drug, followed by amoxicillin-clavulanate, minocycline, naproxen, and trimethoprim-sulfamethoxazole (TMP-SMX) (Table 2). Amongst patients ages 15 to 24, those at highest risk for unintended pregnancy, clindamycin, naproxen,

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TABLE 1.

National Ambulatory Medical Care Survey Demographic Information
Demographic information for NAMCS visits for women aged 15-44 with hidradenitis suppurativa between 2007 and 2018.
Other includes American Indian, Alaska Native, or more than one race reported. Metropolitan Statistical Area (MSA).

	Weighted Frequency of Visits (millions)	Percentage of Visits
Race		
White	30.4	69.3%
Black or African American	13.1	29.8%
Other	0.352	0.803%
Ethnicity		
Hispanic	1.55	3.53%
Not Hispanic	42.3	96.5%
Region		
Northeast	3.89	18.9%
Midwest	4.37	21.2%
South	9.70	47.1%
West	2.63	12.7%
MSA		
MSA	41.9	95.6%
Not MSA	1.93	4.41%
Smoking Status		
Smoker	13.9	38.8%
Non-smoker	21.9	61.2%
Insurance		
Private	24.3	62.9%
Public	12.0	31.0%
Other	2.35	0.704%

and topical clobetasol were most commonly prescribed (Table 3). Adalimumab was prescribed at an estimated 10.3 thousand visits (0.211%). At visits in which medication from the 30 most common therapies was prescribed, 31% of visits included a medication that was pregnancy category C or above (Table 2). We were unable to accurately determine the number of visits for HS in pregnant patients and pregnancy tests ordered at visits due to the relatively small frequency of patient visits.

DISCUSSION

As almost half of pregnancies are unintended, it is important that dermatologists are considering a medication's pregnancy risk when prescribing to this population. Since only 1.84% of all visits for women of childbearing age with HS were with obstetricians, it is the responsibility of primary care physicians, surgeons, and dermatologists to facilitate conversations about potential pregnancy risk when prescribing HS therapy. Special attention should be given to safety data in the first trimester, as this is likely when the patient would be unknowingly pregnant yet still taking HS therapy.

Oral clindamycin, the most commonly prescribed medication in this study, is not recommended unless clearly needed in the first trimester of pregnancy due to lack of data.[4] The third most commonly prescribed drug, minocycline, and the seventh most commonly prescribed drug, doxycycline, are well known to cause teratogenicity, teeth discoloration after in utero exposure, and hepatotoxicity in pregnant females.[4] TMP-SMX, the fifth most commonly prescribed drug, should also be avoided during the first trimester due to its increased risk of neural tube defects.[5]

With the 2018 Food and Drug Administration approval of adalimumab for HS and the increasing evidence supporting the use of other biologics in HS treatment, prescribing patterns have likely changed since 2018.[6] With increased use of biologics, there is the potential to reduce the over 31% of

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TABLE 2.

Most Common Prescription Medications for Hidradenitis Suppurativa
Thirty most common medications prescribed at visits for women aged 15 to 44 with hidradenitis suppurativa between 2007 and 2018. Trimethoprim/sulfamethoxazole (TMP-SMX).

Medication	Pregnancy Category During First Trimester	Weighted Frequency of Visits (thousands)	Percentage of Visits for HS
Clindamycin (oral)	B	490	10.0%
Amoxicillin-clavulanate	B	345	7.04%
Minocycline	D	333	6.80%
Naproxen	B	248	5.06%
TMP-SMX	C	163	3.32%
Acetaminophen-oxycodone	C	143	2.91%
Doxycycline	D	139	2.84%
Topical clobetasol	C	113	2.30%
Phentermine	C	81.0	1.65%
Triamcinolone (injection)	C	79.1	1.61%
Acetaminophen-hydrocodone	C	73.6	1.50%
Metformin	B	71.4	1.46%
Ibuprofen	B	67.0	1.37%
Triamcinolone	C	64.4	1.31%
Ciprofloxacin	C	59.7	1.22%
Tretinoin topical	C	57.8	1.18%
Rifampin	C	55.0	1.12%
Topical Benzoyl peroxide-clindamycin	C/B	51.3	1.05%
Ethinyl estradiol-etonogestrel	Not assigned	47.4	0.97%
Topical sodium bicarbonate	Not assigned	46.1	0.94%
Cephalexin	B	41.9	0.86%
Tramadol	C	41.0	0.84%
Prednisone	B	39.7	0.81%
Isotretinoin	X	36.0	0.74%
Drospirenone-ethinyl estradiol	Not assigned	36.0	0.74%
Meloxicam	C	31.6	0.65%
Medroxyprogesterone	X	31.3	0.64%
Oxycodone	B	29.5	0.60%
Topical silver sulfadiazine	B	29.0	0.59%
Clonazepam	D	26.7	0.54%

women of childbearing age with HS who are receiving therapy that is classified as pregnancy category C or above. However, since systemic antibiotics and hormonal therapy remain first line therapy for mild-to-moderate HS according to the North American Clinical Management Guidelines for HS, there is likely continued and significant use of these teratogenic medications.[6]

We are unable to determine if a teratogenic medication was clinically indicated or if appropriate counseling was provided. However, as many female patients feel that their physicians are not counseling them regarding the impact of HS therapy on childbearing, the results of this study serve as a reminder to dermatologists and non-dermatologists managing skin disease to continue to facilitate conversations about potential pregnancy risk when prescribing teratogenic medications in this population.[2]

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TABLE 3.

Age-Stratified Prescription Medications for Hidradenitis Suppurativa. Ten most common medications prescribed at visits for women with hidradenitis suppurativa between 2007 and 2018 were stratified into 2 age groups: 15 to 24 and 25 to 44.

Medication	Pregnancy Category During First Trimester	Weighted Frequency of Visits (thousands)	Percentage of Visits for HS
Ages 15 to 24			
Clindamycin	B	358	22.4%
Naproxen	B	248	15.5%
Topical Clobetasol	C	111	6.94%
TMP-SMX	C	111	6.94%
Topical Lidocaine	B	92.2	5.77%
Rifampin	C	47.6	2.97%
Topical sodium bicarbonate	Not assigned	46.1	2.88%
Minocycline	D	43.7	2.73%
Topical silver sulfadiazine	B	29.0	1.82%
Isotretinoin	X	27.1	1.70%
Ages 25 to 44			
Minocycline	D	258	10.5%
Doxycycline	D	139	5.68%
Clindamycin	B	120	4.90%
Amoxicillin-clavulanate	B	94.8	3.87%
Phentermine	C	81.0	3.31%
Acetaminophen-hydrocodone	C	71.4	2.91%
Ibuprofen	B	67.0	2.74%
Triamcinolone (injection)	C	64.4	2.63%
Topical triamcinolone	C	63.8	2.60%
Ciprofloxacin	C	59.7	2.44%

DISCLOSURES

Gabrielle Marie Rivin BA MD has no conflicts of interest to disclose. Alan Fleischer MD is a consultant for Boerhringer-Ingelheim, Incyte, Qurient, SCM Lifescience, Syneos, and Trevi. He is an investigator for Galderma and Trevi.

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