



Original Research

Adequacy of dermatology and ob-gyn graduate medical education for inflammatory vulvovaginal skin disease: A nationwide needs assessment survey



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ARTICLE INFO

Article history:

Received 10 October 2019

Received in revised form 22 January 2020

Accepted 29 January 2020

Keywords:

Inflammatory vulvovaginal disease

Medical education

Women's health

ABSTRACT

Background: Many patients with inflammatory vulvovaginal skin diseases, such as lichen planus and lichen sclerosus, experience a delay in diagnosis and lack of appropriate treatment. Unfortunately, patients experience significant morbidity with these conditions.

Objective: The aim of this study was to assess the adequacy of training in vulvar dermatoses for dermatology and obstetrics-gynecology residents (in the United States), with a secondary goal of identifying the most ideal modality to broadly reach these residents with high quality instruction.

Methods: We created a survey with questions relating to attitudes about training in vulvovaginal disease, quantity of current education on the subject, and opinions on ways to improve training. The survey was distributed to obstetrics-gynecology and dermatology residents and program directors nationwide.

Results: Most respondents reported that training was not adequate in this area and that additional education was needed.

Conclusion: We propose that online, interactive, case-based learning modules, created by vulvovaginal experts, could help improve graduate medical education and lead to better patient outcomes.

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Introduction

There are practice gaps in diagnosing and managing inflammatory vulvovaginal diseases (e.g., lichen sclerosus [LS], lichen planus [LP]; Margesson, 2013; Schlosser, 2012), which can lead to significant morbidity and reduced quality of life (Cheng et al., 2017). Genital LS, for example, is frequently asymptomatic with subtle clinical findings, and this can lead to a delay in diagnosis and advanced presentation (Margesson, 2013; Schlosser, 2012). Unfortunately, there are major implications to lags in diagnosis. Without proper management, LS and LP can lead to irreversible vulvar scarring and genital disfigurement, pain, sexual dysfunction, or development of squamous cell carcinoma (Margesson, 2013). Thus, it is imperative that dermatology and obstetrics-gynecology (ob-gyn) trainees learn to perform thorough physical examinations, recognize the often subtle clinical findings, and initiate prompt treatment to prevent significant morbidity.

Many vulvar experts are self-taught (Venkatesan et al., 2012). Previous studies have proposed vulvar disorder competencies for trainees and described gynecology residency needs from program directors' (PDs') perspectives (Edwards et al., 2018; Venkatesan et al., 2012). Our study investigated the educational needs of dermatology and ob-gyn trainees from the perspectives of PDs and residents.

Methods

We created 10-item surveys (SurveyMonkey.com) for dermatology and ob-gyn PDs and residents nationwide. Surveys were e-mailed between November 2018 and January 2019 to the 127 dermatology PDs on the American Professors of Dermatology listserv and to ob-gyn PDs via a list of 277 program coordinator e-mails extracted from Doximity.com. This was followed up with one reminder e-mail. PDs were asked to forward the survey to their residents.

Demographic information was collected, and survey questions included preferred learning modalities for supplementing clinical experiences, estimated volume of patients with vulvovaginal

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symptoms, presence of a vulvar specialty clinic, perceived relevance and adequacy of existing curriculum and clinical exposure, and topics of greatest need (based on expert recommendations about vulvar disease competencies; Venkatesan et al., 2012).

Results

A total of 165 survey responses were received. Most participants identified as female and were in Midwestern states (Table 1). The majority of programs reported having a formal curriculum on vulvar skin disease (dermatology 3.24 hours/year; ob-gyn 5.83 hours/year). Dermatology residents estimated seeing 34 patients with vulvar disease per year; ob-gyn residents saw 14 per year. Most programs did not have access to a vulvar specialty clinic.

Approximately half of ob-gyn residents and PDs answered that vulvar disease training was not completely adequate (Table 2). Most dermatology residents (61.7%) reported that their training was adequate and expressed a low need for additional training. This was incongruent with dermatology PDs, of whom 54.17% reported a moderate need for additional education. Across all groups, anogenital LS, mucous membrane LP, and anogenital lichen simplex chronicus were most commonly identified as areas requiring additional training.

More than 80% of ob-gyn residents and PDs responded that vulvar disease education was either relevant or extremely relevant to their future practice (Table 2). Only 54.35% of dermatology residents responded that the subject was relevant or extremely relevant, whereas nearly 70% of dermatology PDs answered that it was relevant or extremely relevant.

Both ob-gyn and dermatology residents acknowledged that a gynecology/dermatology rotation was the best way to supplement clinical experience (Table 2). Ob-gyn PDs answered that an online module would be the best supplement, whereas most dermatology PDs preferred a gynecology/dermatology rotation as a supplement.

Discussion

Even though most dermatology and ob-gyn residency programs teach a formal curriculum on vulvar skin disease,

additional training would likely equip trainees to better treat vulvar disease. We included ob-gyn data to highlight that gynecologists also do not feel adequately trained in vulvar disease and that this contributes to the lack of ownership of these diseases by either specialty.

Interestingly, dermatology PDs reported that the subject was more relevant and that there was a greater need for additional training than did dermatology residents. This discrepancy might be attributable to lack of resident experience leading to mistaken extrapolation of knowledge about inflammatory skin diseases (e.g., eczema, psoriasis, contact dermatitis, lichen simplex chronicus, LP) that can present elsewhere on the body to genital dermatoses. PDs may better recognize the unique challenges and nuances of the treatment and diagnosis of vulvovaginal skin diseases.

Many respondents answered that a gynecology/dermatology rotation would be the best way to supplement current education, but there are practical limitations in creating such vulvar clinics. Many also preferred didactic lectures, but these may be challenging to implement due to faculty's varying expertise in vulvar dermatoses. Web-based, interactive case modules can improve knowledge about women's health issues (Törnävä, 2018), and case-based learning was supported by all groups.

Our goal is that the creation of such a resource might help close the gap in the diagnosis and management of vulvar inflammatory disease. We envision online, case-based teaching, created by vulvar experts, that includes high-quality clinical photographs, videos, notes, algorithms, and links to seminal and review articles as well as to additional online resources to teach both the basics of common vulvar dermatoses and to delve into the complexities and nuances unique to vulvar diseases (e.g., inflammatory dermatosis with superimposed disorders, including contact dermatitis, herpes simplex virus, secondary candidiasis, or concomitant atrophic vaginosis).

Study limitations include a small sample size and limited number of responses from ob-gyn PDs and certain geographic regions, possibly related to survey fatigue. An effort to improve response rate by contacting ob-gyn PDs through other e-mail listservs proved unsuccessful. There is likely also response bias in our results because most respondents were women. Among

Table 1
Demographic characteristics of survey respondents.

	Residents		Program directors	
	Dermatology, n (%)	Obstetrics-gynecology, n (%)	Dermatology, n (%)	Obstetrics-gynecology, n (%)
Total No.	48 (29.1)	43 (26.1)	52 (31.5)	22 (13.3)
Gender identity				
Female	31 (64.58)	34 (79.07)	35 (72.92)	13 (68.42)
Male	16 (33.33)	8 (18.6)	11 (22.92)	5 (26.32)
Nonbinary	1 (2.08)	0 (0)	0 (0)	0
Prefer not to say	0 (0)	1 (2.33)	2 (4.17)	1 (5.26)
Program region				
New England	9 (18.75)	2 (4.65)	7 (14.58)	7 (14.58)
Mid-Atlantic	3 (6.25)	7 (16.28)	6 (16.67)	6 (16.67)
South	8 (16.67)	3 (6.98)	9 (18.75)	9 (18.75)
Midwest	15 (31.25)	25 (58.14)	15 (31.25)	15 (31.25)
Southwest	3 (6.25)	4 (9.3)	3 (6.25)	3 (6.25)
Pacific Coastal	10 (20.83)	0 (0)	8 (16.67)	8 (16.67)
Other	0 (0)	2 (4.65, Puerto Rico, Caribbean)	Other: 0 (0)	Other: 0 (0)
Year of training				
PGY-1	1 (2.13)	16 (37.21)		
PGY-2	18 (38.3)	6 (13.95)		
PGY-3	12 (25.53)	11 (25.58)		
PGY-4	15 (31.931)	10 (23.26)		
PGY-5	1 (2.13)	0 (0)		

PGY, postgraduate year

Table 2
Selected questions and results.

	Dermatology residents, n (%)	Obstetrics-gynecology residents, n (%)	Dermatology program directors, n (%)	Obstetrics-gynecology program directors, n (%)
How do you feel about the adequacy of your program's education regarding inflammatory vulvovaginal skin diseases?				
Not adequate, high need for additional training	1 (2.13)	11 (25.58)	4 (8.33)	4 (20)
Not completely adequate, moderate need for additional training	9 (19.15)	21 (48.84)	26 (54.17)	10 (50)
Adequate, low need for additional training	29 (61.7)	11 (25.58)	18 (37.5)	4 (20)
More than adequate, no additional training needed	8 (17.02)	0 (0)	0 (0)	2 (10)
How relevant would additional education in the area of vulvovaginal disease be to your or your residents' future practices?				
Extremely relevant	9 (19.57)	22 (52.38)	8 (16.67)	8 (40)
Relevant	16 (34.78)	14 (33.33)	25 (52.08)	8 (40)
Somewhat relevant	19 (41.3)	4 (9.52)	14 (29.17)	3 (15)
Not at all relevant	1 (2.17)	1 (2.38)	0 (0)	1 (5)
Unsure	1 (2.17)	1 (2.38)	1 (2.08)	0 (0)
What would be the best way to supplement clinical experiences with vulvovaginal disease? Select all that apply.				
Online, interactive case-based teaching	15 (31.91)	20 (46.51)	12 (46.15)	11 (55)
Gynecology/dermatology rotation	27 (57.45)	36 (83.72)	18 (69.23)	8 (40)
Didactic lectures	21 (44.68)	24 (55.81)	13 (50)	1 (5)
No supplemental training necessary	6 (12.77)	1 (2.33)	3 (11.54)	0 (0)
Other, please specify	2 (4.26)	2 (4.65)	0 (0)	0 (0)
Selected comments				
Dermatology residents	Obstetrics-gynecology residents	Dermatology program directors	Obstetrics-gynecology program directors	
I think we lack basic hands on training- I'm not even comfortable biopsying this area or choosing what type of biopsy to do and I am a second year resident.	An online tutorial would be the most helpful thing if a vulvar clinic is not available.	A big gap in my view is the lack of clinical images with good explanations about what the morphology is that leans towards one inflammatory vulvar skin disease versus another.	Unfortunately, we do not have a high patient volume with diagnosis of inflammatory vulvar skin disease, therefore additional educational with photos would be helpful.	
We receive extensive education already.	Interested in oncology, differentiation between conditions and malignancy is key.	Stressing the importance of vulvar skin dx is important as it can start in childhood & persist with or without symptoms, thus increasing risk of SCC, etc.	Actual clinic experience would be ideal but there is not enough time with all the other requirements which is why an interactive e-module e.g. core cases module may be best alternative.	
As a female dermatologist I want to make sure I can help female patients who many dermatologists may not feel as comfortable treating.		Some residents who plan to have a significant portion of their patients with this condition may supplement their education: I would say state and/or national meetings is best venue for that education. Alternatively, if online resources existed, self-directed optional learning would be another option.	It is a category of diseases that is not commonly treated in a residency clinic, yet for most residents is best remembered by seeing it in person, or at least in photos of real cases. I think an online module would be helpful as it could incorporate pictures and ask relevant questions about the particular disease and its treatment.	

dermatology resident respondents, 64.58% identified as female and 79.07% of ob-gyn resident respondents were female. These response rates reflect that women make up 60.8% of dermatology residents and 83.8% of ob-gyn residents in the United States (Brotherton and Etzel, 2019).

Similarly, 72.92% and 68.42% of dermatology and ob-gyn PD respondents, respectively, were women. However, studies have reported that only 48% of dermatology PDs (Nambudiri et al., 2018) and 47.3% of ob-gyn PDs (Hofler et al., 2015) were women. It is conceivable that among PDs, those with a preexisting interest in vulvar skin disease were more likely to participate.

Conclusion

The early diagnosis and appropriate management of inflammatory vulvovaginal skin disease is critical to preserve tissue architecture and prevent the potential development of malignancy. However, the diagnosis and treatment of these conditions is challenging and often nuanced, and education for these diseases needs to be optimized during ob-gyn and dermatology residency training.

The results of our nationwide needs assessment survey confirm that ob-gyn and dermatology residents and PDs tend to agree that additional education in this area would be beneficial. Given that establishing a vulvar specialty clinic at each residency program is not feasible, we advocate for the development of interactive, case-based modules that include high-quality clinical photographs, videos, notes, algorithms, and links to seminal and review articles, as well as additional online resources to supplement existing education on inflammatory vulvovaginal disease.

Conflict of Interest

None.

Financial disclosures

None.

Funding

None.

Study approval

N/A.

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