Discrepancies by dermatology resident gender in diagnostic confidence and management of female and male genital lichen sclerosus

Drew Kuraitis MD PhD, Brittany Stumpf MD, Andrea Murina MD

Affiliations: Department of Dermatology, Tulane University, New Orleans, Louisiana, USA

Corresponding Author: Drew Kuraitis, 1430 Tulane Avenue #8036, New Orleans, LA 70112, Tel: 504-988-5114, Email: dkuraiti@tulane.edu

Abstract

Physician gender may impact their exposure to genital dermatoses during residency. The purpose of this study was to survey current dermatology residents regarding their comfort in diagnosing and managing lichen sclerosus. As residents progress through training, confidence improves in diagnosing and managing both male and female lichen sclerosus. However, residents overall feel less comfortable with male genital lichen sclerosus, with female residents displaying the greatest confidence discrepancy. This study highlights gender discrepancies with dermatology resident confidence and practice habits and may serve to further guide curricula to address these disparities.

Keywords: gender, genital examination, lichen sclerosus, resident education

To the Editor:

Lichen sclerosus (LS) is a chronic dermatosis that commonly affects the anogenital region in a female-to-male ratio of up to 10:1 [1]. Female patients often prefer that female physicians perform anogenital examinations [2]. Gender discordance among providers and patients may lead to differential exposure to genital skin diseases during residency training. Dermatology residents may not feel confident making anogenital diagnoses in opposite gender patients. The purpose of this study was to evaluate current dermatology residents in their confidence in managing both male and female LS based on resident gender and level of training.

An anonymous, Institutional Review Board-exempt survey was distributed to dermatology residents via members of the Association of Professors of Dermatology listserv. Response comparisons between resident gender and postgraduate year (PGY) level were performed using the Student's t-test and one-way analysis of variance, respectively. Practice habits were analyzed using the Chi-squared test.

A total of 95 residents completed the survey, though 19 additional individuals started but did not complete the survey. Of the 95 respondents, 55 residents identified as female and 40 identified as male. Training level of respondents included 32 at PGY2, 32 at PGY3, and 21 at PGY4. The majority of residents (85) were in academic residency programs with the remainder in community-based programs. The presence of a genital dermatology specialist in their program was reported by 33 respondents. All US regions were represented including 40 residents from the southern United States, 34 from the northeast, 16 from the Midwest, and 5 from the west coast. The numbers of LS cases seen by the residents varied significantly; 25 residents saw less than 5 cases of LS per year, 63 saw 5 to 19 cases, and 7 saw more than 20.

Confidence in diagnosing male and female LS varied by resident gender (**Table 1**) and PGY level (**Table 2**). Among resident gender and all PGY levels, there is a reduced confidence in diagnosing male LS compared to female LS (Tables 1, 2; $P<0.002$), as well as a reduced confidence in treating and counseling

Table 1. *Resident responses by gender when surveyed about their confidence in diagnosing, treating and counseling both male and female lichen sclerosus.*

	Female Resident Response (*n*=55)	Male Resident Response (*n*=40)	P value
Female genital lichen sclerosus			
Confidence in diagnosing	3.8 ± 0.8	4.0 ± 0.5	0.2
Confidence in treating	4.0 ± 0.8	4.1 ± 0.6	0.3
Confidence in counseling	3.7 ± 1.0	3.8 ± 0.7	0.5
Male genital lichen sclerosus			
Confidence in diagnosis	2.8 ± 1.0	3.5 ± 0.8	0.001
Confidence in treating	3.4 ± 1.0	3.9 ± 0.7	0.02
Confidence in counseling	3.1 ± 1.1	3.6 ± 0.8	0.02

Responses were on a scale of 1 (not at all confident) to 5 (very confident). Mean responses ± standard deviation are reported with associated P value.

of male LS versus female LS by female residents (**Table 1**; P=0.02).

When asked if residents show patients the exact location to apply topical medications, 15 (37%) of males and 9 (16%) of females responded "always", 10 (25%) of males and 23 (42%) of females responded "never", and the remainder of responders stated "sometimes" (P=0.004). When asked if residents visualize lesions at follow-up visits, there were no differences when comparing responses ("always," "sometimes," or "never") by resident gender (P=0.2).

Preferred methods of learning more about LS include: lecture by an LS expert (68; 24%), journal articles (52; 19%) and book chapters (50; 18%), discussions among peers (47; 17%) and rotation with an LS expert (28; 10%).

Irrespective of resident gender or level of training, residents feel confident in making the diagnosis of female LS. Confidence in treating and counseling patients with male and female LS improves as residents progress beyond PGY2. However, confidence in diagnosing male LS does not improve as residents progress through training and across resident genders, and in all PGY levels there is reduced confidence in making the diagnosis of male LS compared to female LS. This discordance may relate to discomfort, as residents are overall uncomfortable with male genital examinations and perform genital examinations less frequently on male than female patients [3]. A survey of pediatric residents revealed residents were not confident diagnosing pediatric LS by the end of their training despite gaining confidence in diagnosing other

Table 2. *Resident responses by postgraduate year level of training when surveyed about their confidence in diagnosing, treating and counseling both male and female lichen sclerosus.*

	PGY-2 Resident Response (*n*=32)	PGY-3 Resident Response (*n*=32)	PGY-4 Resident Response (*n*=31)	P value
Female genital lichen sclerosus				
Confidence in diagnosing	3.7 ± 0.7	3.9 ± 0.8	4.1 ± 0.7	0.1
Confidence in treating	3.6 ± 0.9	4.4 ± 0.6	4.3 ± 0.4	<0.001
Confidence in counseling	3.1 ± 0.9	3.9 ± 0.7	4.0 ± 0.9	<0.001
Male genital lichen sclerosus				
Confidence in diagnosis	2.8 ± 1.0	3.3 ± 1.0	3.3 ±1.0	0.06
Confidence in treating	3.1 ± 1.0	3.9 ± 0.9	3.8 ± 0.8	0.002
Confidence in counseling	2.8 ± 0.9	3.6 ± 1.0	3.5 ± 1.0	0.004

Responses were on a scale of 1 (not at all confident) to 5 (very confident). Mean responses ± standard deviation are reported with associated P value.

pediatric conditions as they progressed through training [4].

There was no difference among male and female resident responses when asked if they visualize LS lesions at follow-up visits, with overall 35% stating that they "never" do. Regular visual inspection is important to monitor for development of malignancy especially in older patients, as there may be a 20-year lag between LS onset and LS-associated squamous cell carcinoma [5].

Limitations of this study include selection bias via reliance on a listserv that requires faculty members to forward the survey to residents. The study also had location bias because of limited responses (5.5%) from programs in the western United States. An additional limitation is the relative rarity of lichen sclerosus, particularly in male patients, who often present to the department of urology instead of dermatology. Residents may have limited opportunities to see a range of mimics of genital lichen sclerosus.

This study demonstrates discrepancies in genital LS diagnostic confidence between male and female dermatology residents. These results highlight gender differences among dermatology resident practice habits and may serve to guide academic curricula to ensure that male LS is addressed, so that graduating residents may feel confident in their ability to manage this condition.

Potential conflicts of interest

Andrea Murina MD is a speaker for Abbvie, Celgene, Eli Lilly, Janssen and Novartis. The authors do not have other conflicts of interest.

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