Retrospective review charachterizing a pediatric vulvar dermatology clinic

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Abstract

This study aims to characterize the diseases seen in a multispecialty pediatric dermatology-gynecology vulvar clinic at CNH. Vulvar dermatology is a field in which both dermatologists and gynecologists may lack sufficient experience and comfort. Relatively few vulvar dermatology clinics exist in the US and likely help to ameliorate that knowledge gap. Characterizing the diagnoses (and misdiagnoses) treated at the CNH vulvar dermatology clinic will help to provide insight into these knowledge gaps and benefit of multidisciplinary clinics. It is also likely that there are disparities in referrals to the vulvar dermatology clinic based on socioeconomic status and race. Comparing demographic data of patients seen in vulvar dermatology clinic compared to general dermatology clinic may provide insight into disparities to access to care. In addition, there may be ethnic and racial risk factors for vulvar dermatologic diseases that have not been described. The multiethnic, multiracial patient population seen in this clinic will provide early insight into these unanswered questions.

Introduction

Vulvar disease in pediatric females has not been widely explored in the literature, with most studies focusing on infectious vulvo-vaginitis. The range of conditions seen by our multispecialty dermatology vulvar clinic at CNH covers vulvar skin diseases, which is largely non-infectious in nature. This primary study aim is to characterize the diseases seen in a multispecialty pediatric dermatology-gynecology vulvar clinic at CNH.

The primary objective of this study is to characterize the diseases seen in a joint dermatology-gynecology vulvar clinic at CNH. In a similar study performed in 2001, dermatitis was deemed the most common cause of presentation at a vulvar dermatology clinic, encompassing 33% of the study population. Following dermatitis, psoriasis and lichen sclerosus were the next most common. Other conditions seen less frequently include: streptococcal vulvitis, vulvar tumors, staphylococcal folliculitis, labial fusion, genital warts, bullous pemphigoid, tinea scabies nodules, erythema annular centrifigum, vitiligo, and mulloscum contagiousum (Fischer & Rogers 2000).

The secondary aim is to describe epidemiological, ethnic, and racial risk factors specific to vulvar dermatologic diseases. Certain conditions frequently seen at the multispecialty dermatology vulvar clinic at CNH have been associated with disparities in socioeconomic status, race, and ethnicity. For example, lichen sclerosus has been associated with a lower familial socioeconomic status (Powell & Wojnarowska, 2001) and there is very little published information regarding the ethnic or racial epidemiology, presentation and natural history of pre-pubertal LS.

As a field encompassing both dermatology and gynecology, vulvar dermatology is a field in which both dermatologists and gynecologists alone may lack sufficient experience and comfort in. Currently, across the United States, relatively few joint vulvar dermatology-gynecology exists, especially with a pediatric focus. Frequently, primary care providers are tasked with seeing patients experiencing cutaneous-vulvar symptomology. Awareness of prevalent conditions has the potential to aid in diagnostic challenges.

Methods and Materials

We conducted a retrospective review of 180 patient charts from pediatric patients seen at the joint dermatology-gynecology at Children's National Hospital, at least once between January 2016 and June2020.
Data collected from the charts included patient diagnosis, demographics, vulvarsymptoms, and prior care related to the patient's vulvar symptoms. Data was entered into a RedCap database and analyzed.

Results

Among the 180 patients seen (mean age 6.89 ±SD 4.63), the three most common conditions seen in the clinic are as follows: pediatric vulvar lichen sclerosus (69.9%), vitiligo(21.69%), and vulvovaginitis (21.69%). In total, 83 conditions were evaluated in thismultispeciality clinic. Approximately 17.8% of patients with pediatric lichen sclerosus and 38.9%of patients with vitiligo were misdiagnosed at least once. On average, from the time of symptomonset to a diagnosis, those with PVLS waited 14.58 months and those with vitiligo waited 10.29months till diagnosis. Of those with PVLS who first received a misdiagnosis, 92.8% of the time the diagnosis was made outside of the dermatology-gynecology clinic. Of those with vitiligo who first received a misdiagnosis, 75.0% of the time the diagnosis was made outside of the dermatology-gynecology clinic. In the paper, epidemiological factors for the clinic as a whole and for the three most common diseases are discussed.

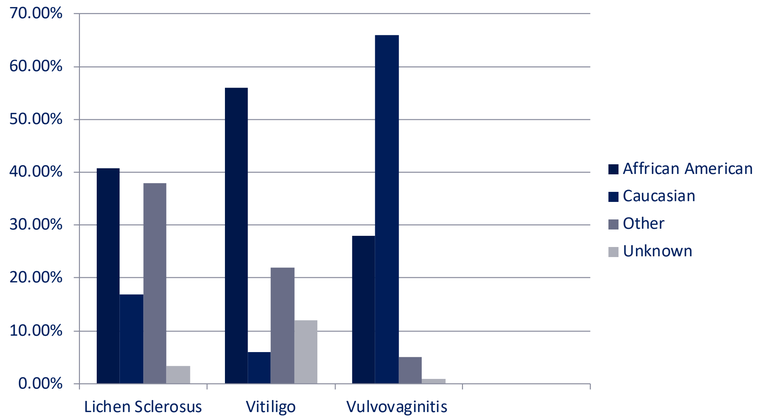

Chart 1. Selected diseases stratified by race.

Disease	Misdiagnosed (%)	Misdiagnosed by PCP	Average time to diagnosis
Lichen Sclerosus	17%	82%	14.58 months
Vitiligo	50%	67%	10.29 months

Discussion

Vulvovaginal complaints in prepubertal girls are common and account for up to 80% of childhood visits to gynecologists. Some common complaints include vulvovaginal itching, irritation, rash, bleeding, and/or pain. Vulvovaginal complaints encompass a wide variety of conditions. According to the literature the most often encountered include vulvovaginitis (infectious and noninfectious), lichen sclerosus, genital ulcers, labial adhesions, and urethral prolapse. However, this clinic saw a higher percentage of cases of lichen sclerosus. The higher percentage of African Americans/Blacks seen at this clinic may account for this finding.

All these diagosis are benign (with LS holding a risk of vulvar cell squamous cell carcinoma risk later in life) and can often be managed in the outpatient setting with close and consistent follow-up. Frequently a diagnosis can be made with a through history and physical exam. Characterizing the diagnoses (and misdiagnoses) treated at the CNH vulvar dermatology clinic will help to provide insight into these knowledge gaps and benefit of multidisciplinary clinics.

Conclusions

Our study addresses a gap in published information on pediatric vulvar symptomsand patient characteristics in a multispecialty dermatology-gynecology interdisciplinary clinic.The chart review highlights the variety of conditions seen and complexity of care faced in apediatric dermatology-gynecology clinic, with emphasis on the risk for a delay in diagnosis whenvulvar symptomatology is diagnosed in patients seen outside of a dermatology-gynecology cliniciinitially. Enhanced training at the pediatric primary care level is needed to help guide cliniciansin accurately diagnosing pediatric vulvar complaints.

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References

Fischer, G., & Rogers, M. (2000). Vulvar disease in children: a clinical audit of 130 cases. *Pediatric dermatology*, *17*(1), 1-6.

Fischer, G. O. (1996). The commonest causes of symptomatic vulvar disease: a dermatologist's perspective. *Australasian journal of dermatology*, *37*(1), 12-18.

Powell, J., & Wojnarowska, F. (2001). Childhood vulvar lichen sclerosus: an increasingly common problem. *Journal of the American Academy of Dermatology*, *44*(5), 803-806.

Williams, T. S., Callen, J. P., & Owen, L. G. (1986). Vulvar disorders in the prepubertal female. *Pediatric annals*, *15*(8), 588-605.