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BRIEF COMMUNICATION

Vulvar Neurodermatitis in a Postmenopausal African-American Patient: A Case Report

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Lichen simplex chronicus commonly presents as a distressing vaginal lesion caused by severe, cyclical itch-scratch behavior. Lichen simplex chronicus is diagnosed by obtaining a detailed medical history, performing a physical exam, and recording of self-reported symptoms. Lichen simplex chronicus can be treated by corticosteroids, immunomodulators, antiepileptics, antihistamines, antidepressants, and phototherapy. Our case describes a 55-year-old female patient who presented to a clinic with recurrent vaginal itching, combined with compulsive scratching behavior that disrupted daily functioning. Physical examination revealed hypertrophic nodules located on the labia minora with scaling and hyperpigmentation. And the patient was diagnosed with lichen simplex chronicus. Empirical treatment with behavioral modifications and clobetasol propionate cream with an occlusive dressing produced significant improvements in symptoms at a six-month follow-up. Lichen simplex chronicus can have unusual presentations and; therefore, must be carefully differentiated from infectious and malignant skin lesions.

Key Words: Case reports, Lichen simplex chronicus, Neurodermatitis, Skin diseases, Vagina

INTRODUCTION

Lichen simplex chronicus (LSC) or neurodermatitis, is characterized by dry and patchy areas of the skin that tend to be thick and scaly. LSC is commonly seen between ages 35 to 50 years of age, affecting approximately 12% of the population in the world where women are more affected than men [1]. Typical sites for LSC are in the vulva, ankles, scrotum, scalp, neck, and extensor forearms [2]. Other sites can involve any self-accessible area that can be constantly itched, for example, the perianal area [3,4]. The etiology of LSC is difficult to pinpoint, however, several factors such as depression and anxiety; sleep disturbances as well as other psychiatric disorders (such as dissociative experiences and obsessive-compulsive disorder) have all been shown to play a role in the development and persistence of LSC [1]. LSC patients face psychological stress, issues with sleep, decreased flexibility, worsening social relations, issues with sexual intercourse and overall, a lower quality of life [5].

Diagnosis of LSC is done by performing a physical exam, obtaining a full medical history, dermoscopy of the affected area, and account of self-reported symptoms [3]. Allergic reactions due to contact dermatitis should be ruled out and if LSC is found in a genital area, then test for possible fungal infection is also advised [3]. Excluding possible infectious cause is important in establishing a diagnosis of LSC. Skin biopsies and blood tests may be performed to confirm diagnosis [3].

Treatment of LSC is multifactorial, and management can pose a challenge as this condition tends to have a psychological and physical component to it. It is important to first control the disease and address any underlying psychologic causes for the persistent itching

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[3]. First line therapy includes the use of high potency topical corticosteroids with antipruritics to help alleviate and ease the suffering of the patient [3]. Other treatments that have been reported include immunomodulators, antiepileptics, antihistamines, antidepressants, and phototherapy [5].

In our case report, we present an unusual presentation of LSC in a post-menopausal African American patient that was ultimately diagnosed after extensive patient history, physical exam, and corroborating laboratory examinations.

CASE REPORT

A 55-year-old African American female was referred for consultation to the Texas Tech Clinic at the Permian Basin because of intense, recurrent, and unstoppable itching that disrupted her daily life and sleep, making her overall quality of life as "miserable." Her vulvar skin condition started one year before consulting our clinic as dark spots that were located in the labia majora. The patient believed the irritation was due the soap she currently was using, so she changed soaps and offered minimal relief. The spots did not resolve and soon began itching which prompted consultation with a physician assistant at her small town for which she was prescribed topical OTC (over-the-counter) hydrating lotion. Her symptoms did not improve so she was prescribed Doxepin cream, which did not resolve her itching, as scratching only made it itchier. Eventually having to wake up at night to scratch, she became anxious and abstained from sexual intercourse believing her condition was contagious and was concerned of possible cancer. Due to fear and anxiety she consulted our clinic.

At presentation an extensive history was taken which helped rule out possible inflammatory, infectious, neoplastic, environmental neuropathic, and behavioral causes of vulvar pruritus. During her physical exam, dry, patchy raised nodularaties that were leathery, scaly and thick was observed most likely associated with hypertrophic epidermis from the continuous scratch-itch cycle (Fig. 1). Supporting the clinical finds, a wet mount was performed to rule out candidiasis leading to a biopsy not being considered clinically necessary. Given the clinical finding outlined above, the final diagnosis of LSC was made. We were then able to give the patient adequate explanation of her diagnosis and provide much needed reassurance regarding her sexual health while also preparing the patient for the challenging treatment ahead that would include the behavioral modifications of breaking the itch-scratch cycle and all too often life-long treatment that comes with this diagnosis.

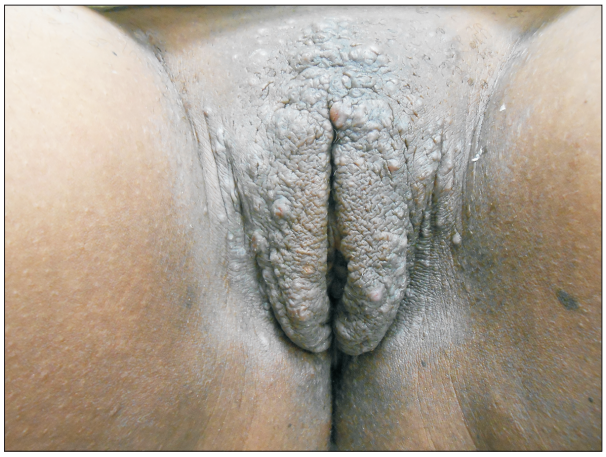

Fig. 1. Image of the patient's vulva on initial presentation. Notice the hypopigmentation, thick, dry, leathery, raised nodularaties sparse around the vulva.

Treatment was based on a combination of decreasing the inflammation, reducing the irritants and providing symptomatic relief for the pruritus as well as interrupting the continuous scratching that perpetuated the condition through behavior modification and counseling. Clobetasol in an occlusive tape using Telfa was used twice daily for 60 days as well as advised to use cotton underwear. Additionally, hydroxyzine pamoate 50 mg by mouth was prescribed to be taken at night to help her itching and improve her sleep. Moreover, a lot of reassurance helped as she observed abatement of her symptoms and improvement of her condition.

After six months of treatment, her itching and her vulvar appearance began to improve, showing a reduction in scaliness and decreased nodularity as seen (Fig. 2). She no longer was experiencing compulsive scratching behavior and reported significant reduction in symptom severity. The occlusive dressings were discontinued and clobetasol application was reduced to three times a week.

The written informed consent was obtained from the patient for publication of this article and accompanying images.

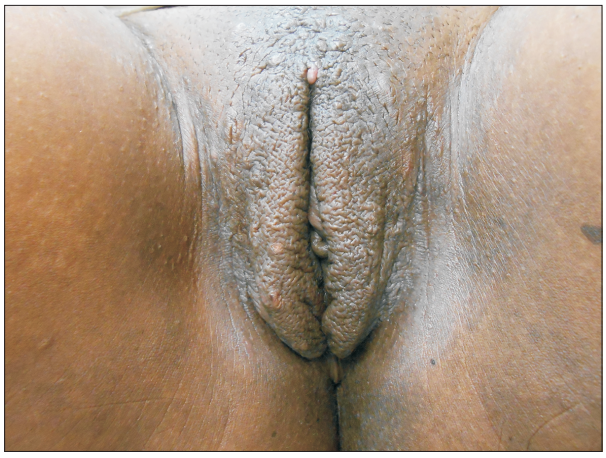

Fig. 2. Image of the patient's vulva six months after treatment with an occlusive dressing of clobetasol. There is markedly reduced nodules and as well as hypopigmentation.

DISCUSSION

The above case presents us with a unique clinical presentation of widespread severe LSC lesions. Dermatologic lesions of LSC are commonly characterized by a flat, smoothened appearance. In this case, the patient presented with thickened, leathery nodularities that widened the final differential diagnosis candidates. Given the morphology of the lesions themselves, one could be swayed to a case of human papillomavirus (HPV) genital warts or even cancer. Despite the confounding lesion morphology, the patient's reports of a persistent itch-scratch cycle was pathognomonic for diagnosis and commencement of primary treatment. While it is possible for an LSC on HPV, or some other malignancy, our clinical suspicion of final diagnosis was lowered as the patient showed a robust therapeutic response with clobetasol. Upon reviewing the literature there was a similar case in which two patients presented with severe itching over the labia majora and minora which led to an unusual scrotal appearance [6]. While our patient did present with increased rugosity in the labia majora due to constant scratching, they also developed thick, raised, scaly and pale nodularaties, which we were unable to find similar cases in the literature.

Charifa et al. [3] explains that the etiology of neurodermatitis is due to both a primary symptom, reflective of a psychological component or secondary to other cutaneous ailments such as eczema or psoriasis. The development of these pruritic dermatoses and therefore plaque formation typically result from psychological stressors as outlined previously [3]. Fortunately, for both etiologies, the treatment is much the same, and has been found to be relatively effective. LSC is closely associated with a poorer quality of life, declined mental wellbeing, sexual function, and damage to the skin because of repeated scratching. The management of LSC is difficult and it may consume a lot of public health care resources [7]. Despite the challenge, this case report highlights the importance of patient adherence to treatment, and the effect of effective reassurance on the practitioners end. It is through this collaborative effort that eases the minds of patients and promote adherence to treatment which ultimately betters the patients quality of life. Conditions such like these tend to be rooted with a psychological component which should always be accounted for during the treatment of LSC. Being aware of the psychological implications and the discomfort of the patient in this severe case as well as providing counseling and reassurance is crucial when initiating treatment. Such treatment is effective and a safer for LSC afflicted patients that can be a preferred strategy to clinicians.

In conclusion, the patient was found to have vaginal LSC with an abnormal nodular appearance. This responded well to treatment with clobetasol and behavioral modifications. It is difficult in many cases to determine the causality of this illness, owing to its complex multifactorial nature. Fortunately, with proper recognition, appropriate treatment, and being aware of the psychological burden the condition poses, most patients see significant improvement by six weeks' time.

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CONFLICT OF INTEREST

No potential conflict of interest relevant to this article was reported.

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