Koebnerization in a Woman with Extragenital Lichen Sclerosus

Iraj Esfandiarpour,MD
Ali Ekhlasi,MD
Department of Dermatology, Kerman University of Medical Sciences, Kerman, Iran

Corresponding Author:
Iraj Esfandiarpour,MD
Dermatology Department, Afzalipour Hospital, Kerman University of Medical Sciences, Kerman, Iran
Email: irajesfandyar@yahoo.ca

Received: October 5, 2007
Accepted: November 21, 2007

Abstract

Lichen sclerosus (LS) is a chronic benign inflammatory disorder of skin and mucosa which affects patients of all age groups, sex and race, particularly caucasian prepubertal girls and postmenopausal women. The etiology of LS is unknown, but it has been suggested that genetic predisposition to inflammatory disorders, immunological constitutions, hormonal influences and local factors might play a role. Extragenital LS are most common on the neck, shoulders and upper portion of the trunk. It is generally asymptomatic, but occasionally pruritic. The Koebner sign is a well-known diagnostic marker in LS. Typical lesions have been noted to occur following surgical operations, infections, rubbing of skin, in old thermal burn scar, sexual abuse and under tight clothing. We describe a 25-year-old Iranian woman presented with a 2-month history of extragenital LS. The multiple classical lesions of disease were presented over her neck, shoulders, upper part of trunk, the medial area of her thighs and feet at the dorsal site. The diagnosis of LS was confirmed by histological findings. Beside LS classical lesions on her back, linear lesions including Koebner phenomenon were observed at the sites of rubbing and itching of skin. *(Iran J Dermatol 2008;11:86-88)*

Keywords: lichen sclerosus, extragenital, Koebner's phenomenon

Introduction

Lichen sclerosus (LS) is a chronic inflammatory disease that mainly affects prepobertal and menopausal women.[1-3] Although LS most often affects the anogenital region, it may occur in other cutaneous or mucosal sites[4-8]. It can be found in patients of any age groups, sex, or race, but is most commonly present in Caucasian peri- or postmenopausal women.

Halopo reported the lesions for the first time in 1887. Darier in 1892, described its histopathological changes.[9] The etiology of LS is not clearly defined. However, it has been suggested that genetic factors, immunological constitutions, hormonal influences and local factors such as trauma (koebner's phenomenon) might play a role.[8-11] Moreover, surgical operation, infections (*Borrelia*,virus), old thermal burn scar, sexual abuse, tight clothing, friction and rubbing, varicose saphenous vein could be considered as triggers for inducing lichen sclerosus.[6, 12-16] In this study, we describe a woman with LS who had lesions on friction and itching areas of the skin.

Case Report

A married 25-year-old Iranian woman with a 2-month history of cutaneous white lesions on the upper and lower back area referred to our dermatological clinic in Kerman. In past medical history, she mentioned the disease started from small cutaneous lesions on the upper back area, gradually extended to the lower areas and affected the medial areas of both thighs, and finally dorsal aspect of feet.

These lesions had no symptoms such as itching or burning. But, the patient suffered from itching and burning of other skin diseases in the back and continuously irritated her skin by her nail and fingers. The patients did not present any history of diabetes, thyroid and other systemic diseases. She was married for 2 years (with no children) and had a history of HCG injection and clomiphene during the past 4 months. No members of her family had experienced such cutaneous lesions. She only complained of a mild menstrual disturbance during recent years.

In the physical examination, we only found a defuse skin dryness especially in the back and trunk areas. Multiple white plaques and papules with a

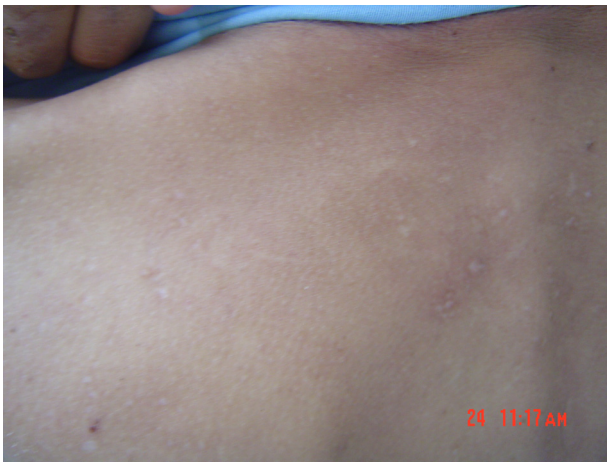

Figure 1: *Linear and confluent white papules of lichen sclerosus on back.*

well-defined border and diameter from 3mm to 1.5cm were seen with some atrophies in some areas in the upper back. In addition to classical lesions, linear and confluent lesions were found on the upper and lower back areas (figure 1). Macules and hypopigmante patches were seen in the medial area of thighs. White lichenoid papules on the dorsal area of both feet were also detected. Genital area, oral cavity, nails and hairs were carefully examined and did not indicate any abnormalities.

The laboratory examinations including ESR, creatinine, liver function tests, and fasting blood glucose were totally normal except for CBS that showed a mild hypocromic microcytic anemia.

In the biopsy of the lesions from the upper back area, follicular plugging, hydropic changes of the basal layer, edema of upper dermis, and collagen replacement was seen in histological evaluation. Elastine stain confirmed the reduction in the skin elastine fibers which indicated the diagnosis of lichen sclerosus. The patient with the diagnosis of LS underwent treatment with topical steroids, penicillin (intra muscular), cryotherapy of the lesions and skin moisturizers. After having the treatment for six months, the lesions were completely cured.

Discussion

LS is a chronic, benign, depigmenting disease of the skin and mucous membranes most frequently affecting the female genitalia. Its cutaneous type (extragenital), mostly affects skin of the neck, shoulders and upper parts of the trunk. The lesions are often asymptomatic. Sometime the disease has itching lesions. Koebner phenomenon is a known marker for LS which initiates with surgical operation, infections, old thermal burn scar, and site of injection, sexual abuse, tight clothing, and radiotherapy. The reported patient had classical lesions of LS on the shoulders, back, medial area of thighs and dorsal of the feet. Moreover, we found some more lesions with linear pattern on her back including well-defined ivory papules and plaques which completely differed from classical genital lesions of LS. These are very rare presentations of LS. It seems that such linear lesions were due to itching with nails and fingers. Such linear patterns of LS lesions (lines of Blaschko) have been reported in other studies.[12-13] These studies were both from Korea and reported extragenital LS lesions. Tood et al.[11] reported two Caucasian women with LS in 1994 in whom the lesions were induced by friction from tight underwear clothing. Both patients' symptoms improved following avoidance of pressure on the skin from tight clothing and one cured completely. Meffent et al in 1994 reported a case of LS having the lesion based on an old skin burn scar.[16]

The etiology of LS is not clearly defined but it seems to be a multifactorial disease. However, its companionship with morphea, alopecia areata, perniciouse anemia, vitiligo and thyroid diseases suggests that the disease is an autoimmune-like disease.[8-10] Beside autoimmune theory, genetic factors including HLA typing especially HLAB40, some infections (*Borrelia* and human papilloma virus), hormonal disorders and traumas are reported as potential etiological factors for LS.[8-9,16-17]

Our patients had no underlying systemic diseases and only suffered from skin dryness in the back which induced itching and burning. With symptomatic therapy and LS treatment, significant improvement in the symptoms and lesions was established after 4-6 months. In conclusion, it is safe to assume that in symptomatic LS with itching and burning lesions, simple symptomatic relief treatments such as emollients could improve the situation of the patients and control the progress of LS lesions.

References

1. Funaro D. Lichen sclerosus: a review and practical approach. Dermatol Ther 2004; 17:28-37.
2. Kelly SC, Helm KF, Zaenglein AL. Lichen sclerosus of the lip. Pediatr Dermatol 2006; 23: 500-20.
3. Mendonca EF, Ribeiro – Rotta RF, Silva MA, Batista AC. Lichen sclerosus et atrophicus of the oral mucosa. J Oral Pathol Med 2004; 33:637-640.

4. Simpkin S, Oakley A. Clinical review of 202 patients with vulval lichen sclerosus: a possible association with psoriasis. Australas J Dermatol 2007; 48:28-31.
5. Heymann WR. Lichen sclerosus. J Am Acad Dermatol 2007; 56: 683-4.
6. Isaae R, Lyn M, Triggs N. Lichen sclerosus in differential diagnosis of suspected child abuse. Pediatr Emrg Care 2007; 23:482-5.
7. Yesudian PD, Sugunendran H, Bates CM, O Mahnoy C. Lichen sclerosus. Int J STD AIDS 2005; 16:465-73.
8. Marini A, Blecken S, Ruzicka T, et al. Lichen sclerosus. New aspects of pathogenesis and treatment. Hautrazt 2005; 56:550-5.
9. Meffert JJ, Davis BM, MC Grimwood RE, et al. Lichen sclerosus. J Am Acad Dermatol 1995;32:393-416.
10. Warren R, Heymann MD. Lichen sclerosus. J Am Acad Dermatol 2007; 56:683-4.
11. Tood P, Halpren S, Kirby J, et al. Licken sclerosus and Koebner phenomenon. Clin Exp Dermatol 1994; 19:262-3.
12. Kimy J, Lee ES. Case of sequentially occurring lesions of facial lichen sclerosus following the lines of Blaschko. J Dermatol 2007; 34:201-4.
13. Cho SW, Yang JE, Park HJ, et al. A case of extragenital lichen sclerosus following Blaschko's lines. J Am A cad Dermatol 2000; 43:903-4.
14. Noakes RR, Spelman L. Koebnerization in woman with generalized lichen sclerosus. Australas Dermatol 2004; 45:144-5.
15. Weigand DA. Microscopic features of lichen sclerosus et atrophicus in acrochordons: A clue to the cause of lichen sclerosus et atrophicus? J Am Acad Dermatol 1993; 28 : 751-4.
16. Meffert JJ. Grimwood RE. Lichen Sclerosus et atrophicus appearing in an old burn scar. J Am Acad Dermatol 1994; 31:671-3.
17. Gar cia- Bravo B, Sanchez – Pedrino P, Rodriguez A, et al. Lichen sclerosus et atrophicus : a study of 76 cases and their relation to diabetes. J Am Acad Dermatol 1988; 19:482-5.