Journal of the Turkish Academy of Dermatology
eISSN 1307-394X

Case Report DOI: 10.6003/jtad.18123c3

A Case of Disseminated Extragenital Lichen Sclerosus et Atrophicus Treated with a Combination of Prednisolone and Methotrexate

Thaer Douri,* MD, Ahmad Zahi Schwaf, MD

Address: *Senior Resident, Ministry of Health, Hama, Syria
E-mail: dermatol2003@yahoo.com
**Corresponding Author:* Dr. Thaer Douri, Ministry of Health, Hama, Syria

Published:
J Turk Acad Dermatol 2018; **12 (3)**: 18123c3
This article is available from: http://www.jtad.org/2018/2/jtad18123c3.pdf
KeyWords: Lichensclerosus, extra-genital, methotrexate, corticostreoids

Abstract

Observation: Lichen sclerosus (LS) is a chronic, inflammatory dermatosis that results in white plaques with epidermal atrophy and scarring. Lichen sclerosus has both genital and extragenitalpresentations .Extragenital involvement is a rare variant favor the trunk , proximal aspects of the extremities, dorsum, and abdomen . The treatment of extragenital LS is similar to that of genital LS. However, treatment of disseminated extragenital LS is a challenge .we described a case of 15-year-old female with two years history of disseminated extragenital LS which was treated successfully with a combination of systemic prednisolone and methotrexate.

Introduction

Lichen sclerosus (LS) is a chronic, inflammatory dermatosis that results in white plaques with epidermal atrophy and scarring. Lichen sclerosus has both genital and extragenital presentations.Extragenital involvement is a rare variant favor the trunk , proximal aspects of the extremities, dorsum, and abdomen. The treatment of extragenital LS is similar to that of genital LS. However, treatment of disseminated extragenital LS is a challenge.we described a case of 15-year-old female with two years history of disseminated extragenital LS which was treated successfully with a combination of systemic prednisolone and methotrexate.

Case Report

A 15-year-old female presented with grouped, asymptomatic, atrophic ivory-white plaques on the, upper chest, neck, dorsum, and abdomen-measuring 1 to 3 Centimeter in diameter, starting two years ago. anogenital region, nail , and membranes mucosa are free (**Figures 1, 2 and 3**). On the other hand the patient is in a good health and routine blood tests were normal.

A punch biopsy revealed atrophic epidermis, homogenized upper dermis, and sparse chronic inflammation in the middle dermis, consist with lichen sclerosus et atrophicus (**Figures 4 and 5**) so the case was diagnosed as disseminated extragenital lichen sclerosus et atrophicus. Because of this wide spread involvement , We decided to treat the patient with 5 mg/day prednisolone, and 10 mg/weekly methotrexate . Excellent response with complete recovery was achieved and the treatment stopped gradually within 2 years (**Figures 6 and 7**).

Discussion

Lichen sclerosus (LS) is a chronic, inflammatory dermatosis that results in white plaques with epidermal atrophy and scarring. Lichen sclerosus has both genital and extragenitalpresentations. Extragenital involvement is a

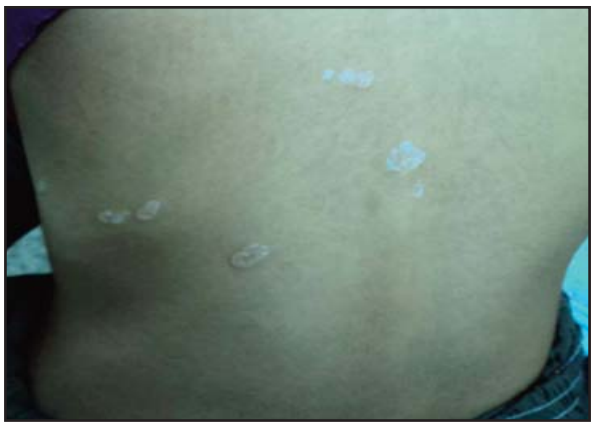

Figure 1. Hypopigmented plaques in the back

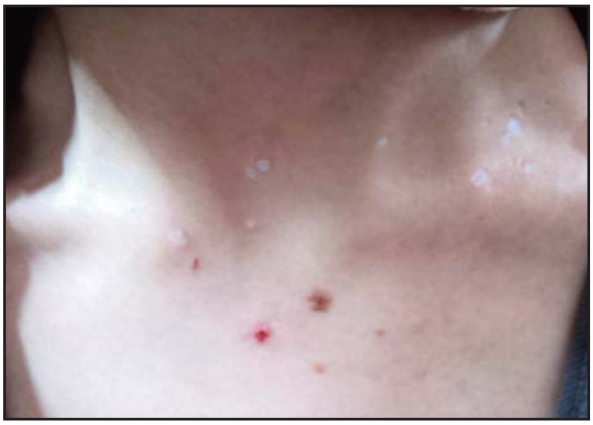

Figure 2. Hypopigmented papules on the neck

rare variant favor the trunk and proximal aspects of the extremities.They occur in 15% to 20% of patients [**1**]. They may be localized or widespread and typically affect the neck, inframammary area, shoulders, wrists, and inner part of the thighs. In contrast to genital LS, which is accompanied by itching, burning, and dysuria, extragenital LS is typically asy mptomatic [**2**]. However, progressive disease may cause discomfort and pruritus [**3**]. LS has an autoimmunological background. Circulating basement membrane antibodies and antibodies against the extracellular matrix protein 1 have been found in patients with LS, and an associationof LS with other autoimmune diseases is frequent [**4,5,6**].

Treatment of extragenital LS included application of super-potent topical glucocorticoids with or without topical calcineurin inhibitors for long-term daily use, Phototherapy, especially UVA1, is a treatment modality treatment modality that has been shown to clear extragenital lesions more effectively than genital l esions, intralesional glucocorticoids at anti-inflammatory doses for more limited disease and systemic glucocorticoids for widespread disease or in cases refractory to topical trea tment [**7,8,9,10,11,12**]. In widespread or disseminated cases of extragenital lichen sclerosus topical treatment not effective and difficult to apply, in this situation we need systemic treatment. *Kreuter A* et al used narrowband UV-B phototherapy for extragenital lichen scle rosus [**13**]. *Formiga Ade A* et all treated disseminated extragenital lichen sclerosus et atrophicus with acitretin [**14**], and *Kreuter A* et al treated. Seven patients extragenital lichen sclerosus with pulsed high-dose corticosteroids combined with low-dose methotrexate PCMT for at least 6 months [**9**].

In recent years, combining methotrexate with corticosteroids has become an increasingly reported treatment strategy for localized scleroderma [**9**].*Uziel* et al were the first to report on the beneficial effects of PCMT in a case series of 10 children with localized scleroderma.

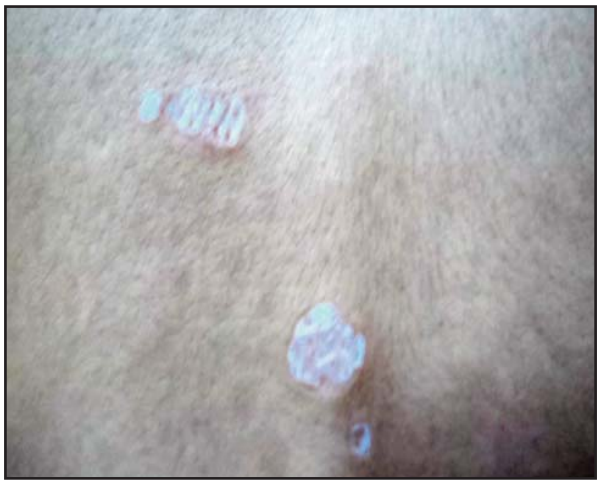

Figure 3. Hypopigmented lesions

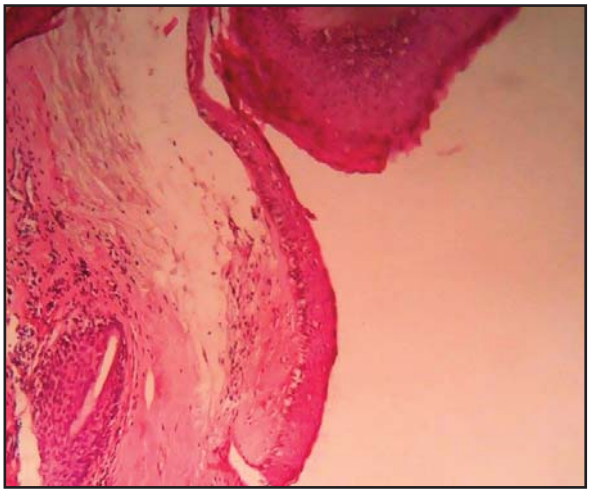

Figure 4. Biopsy from the papules

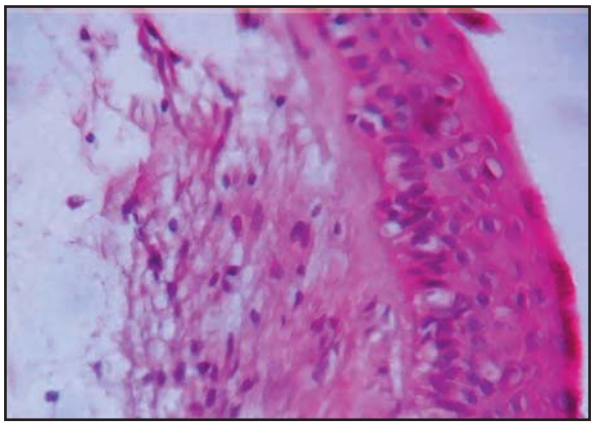

Figure 5. Close up view of the biopsy specimen

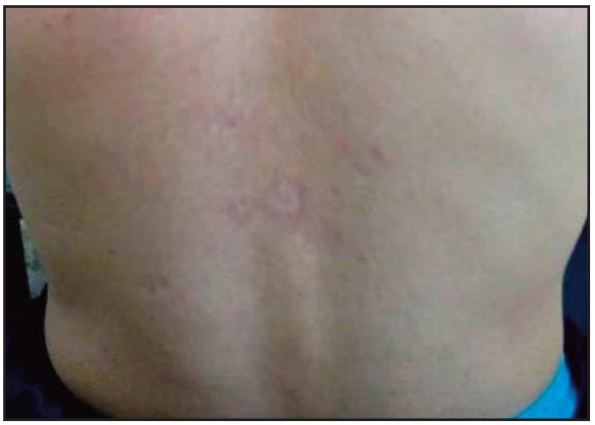

Figure 6. Lesions after treatment

These results were later confirmed by *Weibel* et al in a larger retrospective study of PCMT that included 34 patients with juvenile localized scleroderma [**9**].

The exact mechanism of action of PCMT in sclerotic skin diseases is still unknown. It seems that PCMT combines the early anti-inflammatory effects of corticosteroids with the prolonged antifibrotic effects of methotrexate[**15**]. Methotrexate inhibits several cytokines that play a central role in sclerotic skin diseases, such as interleukins 2,4 and 6 [**16**]. Interleukin 6 has been shown to be upregulated in LS and localized scleroderma and seems to parallel with the extent of disease and response to treatment [**17**]. Although orally adm inistered low-dose methotrexate causes adverse effects in the gastrointestinal tract (e.g. nausea or vomiting), liver (elevations in liver enzyme levels), and central nervous system (e.g. dizziness or headache in about one-third of patients), clinically relevant complications, fortunately, are rare. In clinical trials of methotrexate therapy for rheumatoid arthritis, life threatening pancytopenia and methotrexate-induced lung disease have been observed in 1.4% and in 2.1% to 6.8% of patients, respectively. Although the typical longterm adverse effects of corticosteroids usually do not occur with high-dose treatment, physicians should be aware of rare severe adverse events such as aseptic bone necrosis, anaphylaxis, or even sudden death in patients with renal insufficiency and/or imbalances in electrolyte levels [**7**]. Therefore, patients should be carefully monitored while receiving CMT, especially those with a history of liver , cardiac, and renal disease.

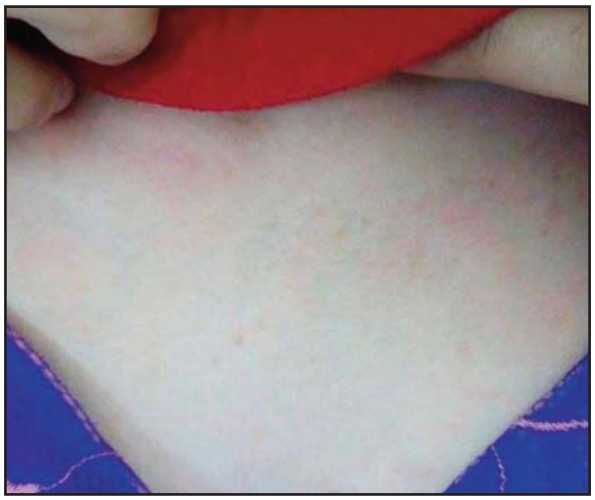

Figure 7. Lesions after treatment

We used to use 5 mg prednisolone/daily combination with10 mg methotrexate/weekly CMT to treated linear scleroderma and generalized morphea with good response . We decided to treatment this case with CMT. Excellent response with complete recovery was achieved and the treatment stopped gradually after 2 years.

Conclusion

Disseminated extra genital lichen sclerosus et atrophicus is very rare and difficult to treat. Methotrexate is well tolerated, low price, and effective choice is such cases. The response of disseminated lichen sclerosis for CMT is as excellent as that of linear scleroderma and generalized morphea.

References

1. Assmann T, Becker-Wegerich P, Grewe M, Megahed M, Ruzicka T. Tacrolimus ointment for the treatment of vulvar lichen sclerosus. Assmann J Am Acad Dermatol 2003; 48: 935-937. PMID: 12789187
2. Quatrano NA, Shvartsbeyn M, Meehan SA, Pomerantz R, Pomeranz MK. Extragenital bullous lichen

sclerosus. Quatrano Dermatol Online J 2015; 16; 21: PMID: 26990331

3. Colbert RL, Chiang MP, Carlin CS, Fleming M. Progressive extragenital lichen sclerosus successfully treated with narrowband UV-B phototherapy. Arch Dermatol 2007; 143: 19-20
4. Howard A, Dean D, Cooper S, Kirtshig G, Wojnarowska F. Circulating basement membrane zone antibodies are found in lichen sclerosus of the vulva. Australas J Dermatol 2004; 45: 12-15. PMID:14 961902
5. Oyama N, Chan I, Neill SM, et al. Autoantibodies to extracellular matrix protein 1 in lichen sclerosus. Lancet 2003; 362: 118-123. PMID:12867112
6. Cooper SM, Ali I, Baldo M, Wojnarowska F. The association of lichen sclerosus and erosive lichen planus of the vulva with autoimmune disease: a case-control study. Arch Dermatol 2008; 144: 1432-1435. PM ID:19015417
7. Neill SM, Lewis FM, Tatnall FM, Cox NH. British Association of Dermatologists. British Association of Dermatologists' guidelines for the management of lichen sclerosus. Br J Dermatol 2010; 163: 672-682. PMID:20854400
8. Neill SM, Tatnall FM, Cox NH. British Association of Dermatologists. Guidelines for the management of lichen sclerosus. Br J Dermatol 2002; 147: 640-649. Review PMID:12366407
9. Kreuter A, Tigges C, Gaifullina R, Kirschke J, Altmeyer P, Gambichler T. Pulsed high-dose corticosteroids combined with low-dose methotrexate treatment in patients withrefractory generalized extragenital lichen sclerosus. Arch Dermatol 2009; 145: 1303-1308. PMID:19917961
10. Beattie PE, Dawe RS, Ferguson J, Ibbotson SH. UVA1 phototherapy for genital lichen sclerosus. Clin Exp-Dermatol 2006; 31: 343-347. PMID:16681572
11. Colbert RL, Chiang MP, Carlin CS, Fleming M. Progressive extragenital lichen sclerosus successfully treated with narrowband UV-B phototherapy. Arch-Dermatol 2007; 143: 19-12
12. Kreuter A, Gambichler T, Avermaete A, et al. Low-dose ultraviolet A1 phototherapy for extragenital lichen sclerosus: results of a preliminary study. J Am AcadDermatol 2002; 46: 251-255. PMID:11807437
13. Kreuter A, Gambichler T. Narrowband UVB phototherapy for extragenital lichen sclerosus. Arch Dermatol 2007; 143. PMID:17875895
14. Formiga Ade A, Torres Ide S, Rocha Bde O, et al. Disseminated extragenital lichen sclerosus et atrophicus treated with acitretin. Skinmed 2014; 12: 62-63. PMID:24720089
15. Kreuter A, Gambichler T, Breuckmann F, et al. Pulsed high-dose corticosteroids combined with low dose methotrexate in severe localized scleroderma. Arch Dermatol 2005; 141: 847-852. PMID:16027298
16. Ihn H, Sato S, Fujimoto M, Kikuchi K, Takehara K. Demonstration of interleukin-2, interleukin 4 and interleukin6 in sera from patients with localizedscleroderma. Arch Dermatol Res 1995; 287: 193-197. PMID:7763091
17. Romero LI, PincusSH. In situ localization of interleukin6 in normal skin and atrophic cutaneous disease. Int Arch Allergy Immunol 1992; 99: 44-49. PMID:1343091